

Richard Teese  
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*Editors*

# International Studies in Educational Inequality, Theory and Policy

Volume 1\_2\_3 Educational Inequality:  
Persistence and Change

 Springer

# International Studies in Educational Inequality, Theory and Policy

This is the first volume of a set of three. The titles of the other volumes are: Volume 2: Inequality in Education Systems. Volume 3: Inequality Educational Theory and Public Policy. These volumes together form the work International Studies in Educational Inequality, Theory and Policy, edited by Richard Teese, Stephen Lamb and Marie Duru-Bellat.

# International Studies in Educational Inequality, Theory and Policy

Volume One

Educational Inequality: Persistence and Change

*Edited by*

Richard Teese

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*With the assistance of Sue Helme*

 Springer

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## VOLUME ONE

### TABLE OF CONTENTS

List of Tables	vii
List of Figures	ix
List of Contributors	xi
List of Abbreviations and Acronyms	xv
Acknowledgements	xvii
Foreword	xix
1 Time and Space in the Reproduction of Educational Inequality <i>Richard Teese</i>	1
2 Equality of Educational Opportunity: A 40 Year Retrospective <i>Adam Gamoran &amp; Daniel A. Long</i>	23
3 Social Inequalities and Education Policy in England <i>Alice Sullivan and Geoff Whitty</i>	49
4 Achievement Gaps Among Racial-Ethnic Groups in the United States: Changes in Families and Schools <i>Mark Berends and Samuel R. Lucas</i>	69
5 Accessible and Effective Education: New Research in a Sophisticated Theoretical Context <i>Hetty P.J.M. Dekkers</i>	117
6 Gender and Education <i>Emer Smyth</i>	135
7 Education Equality Indicators in the Nations of the European Union <i>Luciano Benadusi</i>	155
8 An Insoluble Problem? Social Class and English Higher Education <i>Diane Reay</i>	191

9	Realities and Prospects for Public Education in a Context of Persistent Inequalities: Theorizing Social Reproduction in Latin America <i>Nelly P. Stromquist</i>	205
10	Social Disparities in Education in Sub-Saharan African Countries: Gender, Geographical Location and Family Income <i>Alain Mingat</i>	223
11	Education Inequality and Indigenous Australians: Perspectives and Possibilities <i>Sue Helme</i>	257
	Index of Names	279
	Index of Subjects	287

## LIST OF TABLES

2.1	Mean and Standard Deviation of Per Capita Income in 1990 dollars among six major international studies of school achievement	33
2.2	Per Capita Income (in 1990 dollars) and Per cent of Total Variance Explained by School Resources	34
4.1	Selected Racial-Ethnic Differences in Family Background Characteristics in LS Data, 1972-1992	87
4.2	Racial-Ethnic Differences in School Conditions in LS Data, 1972-1992	90
4.3	Racial-Ethnic Differences in Self-Reported Track Placement in LS Data, 1972-1992	92
4.4	Decomposition of the Relationships of Family Background, Track and School Measures to the Convergence in Black-White Mathematics Scores, 1972-1992	94
4.5	Decomposition of the Relationships of Family Background, Track and School Measures to the Convergence in Latino-White Mathematics Scores, 1972-1992	97
4.6	Decomposition of the Family Background, Individual, and School Measures for Longitudinal Studies High School Senior Cohorts	111
4.7	Relationship of Individual, Family Background, and School Measures to Seniors' Mathematics Achievement in Longitudinal Studies Data, 1972 - 1992	115
7.1	Matrix of GERESE Indicators	163
7.2	Measures of Equity/Inequity of Internal Results (in Reading, Maths and Science)	167
7.3	Matrix of Correlations Bravais – Pearson between the Internal Results Indicator (8x8)	168
7.4	Differences in Learning by SES and by Each of its Three Components (Simple Linear Regression Models)	174
7.5	Differences in Learning by Each of the Three SES Components (Multiple Linear Regression Model)	175
7.6	Rates of Enrolment in School at Age 15	178
7.7	Factors Explaining International Differences in the Level of Influence of Parents' SES on the Acquisition of the PISA 2000 Competencies	180
7.8	Factors Explaining International Differences in the Proportion of the 25-34 Year-Old Population without a Senior Secondary Certificate	181
7.9	Social Inequalities of Opportunity in Educational Progression	183
7.10	Factors Explaining International Differences in Social Inequality of Opportunity in Academic Progression	186
8.1	Top 5 Universities Access Statistics	193
8.2	Top 13 Universities Access Statistics	193
9.1	Index of Inequality in School Attendance between High and Low Wealth Students, by Age-weighted Averages	211
10.1	Average pyramid of coverage and unit cost in African sub-Saharan countries and dispersion across Countries (year 2003 or close)	225
10.2	Degree of concentration of public resources in education in sub-Saharan African countries (in 2003 with time comparisons)	227



10.3	Distribution of individuals 5 to 24 according to gender, geographical location, family income and level of schooling at the time of survey (Consolidation 26 countries, 2000-2005)	241
10.4	Relative chances of being in school at the different levels of schooling in the different social groups (consolidation 26 countries, 2000-2005)	242
10.5	Gender disparities in education in sub-Saharan African Countries, 1990- 2002	250
11.1	Proportion of Years 3, 5 and 7 students who achieved reading, writing and numeracy benchmarks, 2004 (per cent)	265
11.2	Gap in benchmark achievement between Indigenous and All students in Reading, Writing and Numeracy, 2000 and 2004 (per cent)	266

## LIST OF FIGURES

2.1 Citations of the Coleman Report from 1967-2005	24
2.2 The Relation between Per cent of Variance Explained by Resources vs. Per Capita Income (in 1990 Dollars)	36
4.1 NAEP Mathematics Proficiency for 17-Year-Olds by Race-Ethnicity	71
4.2 NAEP Reading Proficiency for 17-Year-Olds by Race-Ethnicity	72
4.3 Black-White Mathematics Differences in the Senior Cohorts Compared with the NAEP Trend Assessment	84
4.4 Latino-White Mathematics Differences in the Senior Cohorts Compared with the NAEP Trend Assessment	85
5.1 Model for (gender) differences in educational choices and performance levels	130
7.1 Dispersion of the National Means of PISA Scores ( in Reading, Maths & Science) and their Standard Deviations	170
7.2 Dispersion Diagram Between Percentage of Scores below Minimum Threshold & Average Scores	171
7.3 Index of Failure by Index of Excellence	172
7.4 Correlation between mean PISA scores and differences in learning related to parents' education	176
10.1 Coverage and public spending per student by level of schooling	225
10.2 Girls to boys ratio at the different levels of schooling (Average for the sub-Saharan low-income countries, 2002)	230
10.3 Wide variability across African countries in terms of gender disparities in school	232
10.4 Gender equity versus global coverage at the end of primary education, 2002	233
10.5 Disparities between girls and boys by level of education, 1990 and 2002	236
10.6 Average relationship between coverage and gender ratio in primary education, 1990 and 2002	238
11.1 Highest level of schooling of people 18 years and over, broken out by Indigenous status	264
11.2 Participation in tertiary education by age group, broken out by Indigenous status	269
11.3 Participation in Vocational Education and Training by age group, broken out by Indigenous status	271

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## LIST OF ABBREVIATIONS AND ACRONYMS

ARR	apparent retention rate
CDEP	Community Development Employment Programs
CEDEAO	Communauté Economique des Etats de l’Afrique de l’Ouest
DfES	Department for Education and Skills
EAL	English as an additional language
ECLAC	Economic Commission for Latin America and the Caribbean
EDGDP	public education spending as share of GDP
EEO	<i>Equality of Educational Opportunity</i> (the Coleman Report)
ESRC	Economic and Social Research Council
FSM	Free School Meals
GCE	General Certificate of Education
GCSE	General Certificate of Secondary Education
HEFCE	Higher Education Council Funding for England
HESA	Higher Education Statistics Agency
HSB	High School and Beyond survey
IADB	Inter-American Development Bank
IDA	International Development Association
IIEP	International Institute for Educational Planning
IMF	International Monetary Fund
IRT	Item Response Theory
MCEETYA	Ministerial Council on Education, Employment and Youth Affairs
MICS	Multiple Index Cluster Surveys
NAEP	National Assessment of Educational Progress
NEET	<i>Not being in Education, Employment or Training</i>
NCER	National Center for Education Statistics
NCLB	No Child left Behind
NELS	National Education Longitudinal Study
NLS	National Literacy Strategy
NLSY	National Longitudinal Survey of Youth
OECD	Organisation for Economic Co-operation and Development
OFSTED	Office for Standards in Education
OREALC	UNESCO Regional Office for Latin America and the Caribbean
PCI	per capita income
PEIR	Primer Estudio Internacional Comparativo
PISA	Program for International Student Assessment
PREAL	Programa de Promoción de la Reforma Educativa en América
PROGRESA	Programa de Educación, Salud y Alimentación

RAND	RAND Corporation
SEI	Duncan <i>Socioeconomic Index for Occupations</i>
SES	socio-economic status
SLE	School Life Expectancy
TAFE	Technical and Further Education
TIMSS	Third International Mathematics and Science Study
UN	United Nations
UNDP	United Nations Development Program
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNICEF	United Nations Children's Fund
VET	vocational education and training
WHO	World Health Organisation

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### *Permissions*

To ensure contemporary coverage of a number of countries in this international comparative study, we have reproduced two papers which have recently appeared in monograph or journal form. Permission from Elsevier Publishing is gratefully acknowledged for reproducing “The effects of generalised school choice on achievement and stratification: Evidence from Chile’s voucher program”, *Journal of Public Economics*, v. 90, Issues 8-9, September 2006, pp. 1477-1503, by Chang-Tai Hsieh and Miguel Urquiola, and from the Department for International Development (DFID) for reprinting a condensed version of a chapter by Sangeeta Kamat from *Education and Development for a Global Era: Strategies for ‘Successful Globalisation’*, Edited by Angela Little and Andy Green, DfID Publications, London, UK. (expected publication December 2006). (The views expressed in this chapter are entirely those of the author and do not necessarily represent DFID’s own policies or views). We also gratefully acknowledge permission from Blackwell Publishing to reproduce an edited version of the critical review essay, originally published in the *British Journal of Educational Studies* (vol. 54, no. 3, September 2006, pp. 308-328) by Martin Thrupp and Ruth Lupton, “Taking school contexts more seriously: the social justice challenge”.

### *Translators*

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## FOREWORD

Persistent inequality has been a major theme of research and theory since the second great wave of educational expansion began in the early decades after the Second World War. ‘Secondary Education for All’ describes this expansion which built on systems of compulsory elementary education dating from the last decades of the nineteenth-century. Attempts to extend compulsory schooling reach back to this period, for example, through the creation of higher elementary schools, vocational schools, and more open merit-based access to academic secondary schools. In some contexts, above all the United States, a general system of high schools was established at a relatively early time (Trow 1979). However, in many other settings, the creation of mass secondary schooling involved sustained political conflict through much of the post Second World War period. The growth of theories of educational inequality, while rich in antecedents, dates from this great period of expansion. Once the whole of the population came within the policy scope of secondary education, major issues of social access and outcomes emerged, forming a theoretical terrain involving a wide range of theoretical and empirical approaches (for a review, see Karabel and Halsey 1979).

Conflict surrounding the growth of mass secondary schooling has often been interpreted along the lines proposed by Max Weber, as essentially a struggle over a status good (Weber 1970: 240-244). While this approach has yielded many valuable studies (Ringer 1979, 1992; Collins 1979; Müller, Ringer, and Simon, 1987), rising aspirations and social resistance to growth clearly need to be seen in the context of economic change and the strategies of “reconversion” which this imposes (Bourdieu 1979). Weber himself stressed that the bureaucratic transformation of both government and business enterprise under modern capitalism intensified the demand for specialised training, sanctioned by qualifications (Weber 1965: 340-341; 1970: 243). But it was only after the Second World War that the directions of industry change would generalise population dependence on formal qualifications and establish an economic framework in which ‘status conflict’ would reach all sections of civil society. Families that had once been largely excluded from secondary education now needed to keep their children at school — publicly signified by a rising statutory leaving age — while those families who had traditionally made extended use of school now had to ensure that all of their children did so and, above all, competed successfully in academic terms (Teese and Polesel 2003). Generalised status conflict over education, based on economic transformation, is the historical source of much of the theory of educational inequality.

The trend to mass higher education in many advanced nations has entrenched this conflict. For access to quality sectors within higher education depends on successful use of secondary education, which in turn hinges on strategic mastery of different ‘pathways’ or ‘streams’ as well as competitive performance within these. While, therefore, status conflict has migrated upwards to higher levels of education, this has also tended to intensify pressures within secondary education itself.

These pressures are towards both greater equity and greater quality. If, for much of the period of post-war growth, equity was seen to be served by differentiating

provision — creation of new and often low-prestige streams — in recent decades the focus has increasingly shifted to quality in opportunities and in achievement within programs. Demand for higher general standards of achievement for all groups represents a rejection of ‘containment’ policies which have sought to displace aspirations into lower status streams (e.g., vocational school-based programs or employment-based alternatives).

The focus on quality as a condition for real equity has, in turn, fuelled the demand for a greater theoretical understanding of the origins of inequality. If mass secondary education has been the historical arena in which social theories of inequality have flourished, the drive for equity based on quality has greatly enlarged the arena to include primary and pre-school education, on the one hand, and tertiary education, on the other.

The search for quality has been driven, not only by concerns for fairness and social justice, but by the social costs represented by the great investment in education that mass participation in education beyond compulsory levels requires. Issues of costs and benefits, of efficiency and effectiveness, have exposed both the outcomes and the processes of education to an unprecedented level of scrutiny, and have contributed to creating a context in which the theorisation of inequality becomes critical, not only from a sociological, but an economics standpoint as well.

The convergence of these concerns can be seen as much in developing nations as in advanced economies which, often enough, dictate how concerns are framed throughout the world. Rich nations, which have failed to eliminate poverty within their own boundaries, believe they can remove it at least within post-colonial boundaries. The very extremes of social inequalities which bedevil the developing world have handed western theorists a licence to laboratory-test policy solutions to educational quality which political conditions at home do not favour.

Integration in a global economy exposes developing countries, not simply to ideological pressures communicated through funding agencies, but to the social pressures for competitive advantage which bedevil the developed world. Economic growth may skew public funding to levels of education which are beyond the reach of most of the population, whose needs for high-quality basic education continue to be ignored. At the same time, little progress is made in extending opportunities for secondary education. The social strata who benefit from growth exercise the political influence which delivers subsidies to schools that only they can access. It is not simply that the forms of inequality typical of the developed world can be seen as it were, *in nuce*, in the developing world. Rather globalisation exports to the poor world the structures and the outlooks which reproduce inequality in the rich world. If the theorisation of educational inequality is to be more than a manifestation of intellectual wealth in the rich world, it has to expose not only the barriers to equity in that world, but how these barriers are also erected in the developing world and indeed imposed on that world as the very tools of its economic and social development.

This book contains a series of studies on inequality in education in a range of different national settings. There are also comparative international studies. The aim of the first volume is to bring together research papers which provide an overview of trends or which offer a synthesis of findings. These papers cover both the developed and the developing world — the United States, Latin America as a whole, England, India, the countries of sub-Saharan Africa, and the countries of the European Union. How rich countries can fail their poorest indigenous communities is the theme of Helme's chapter on Aboriginal education in Australia.

After decades of educational growth, to what extent has equality been achieved? To the extent that inequality has persisted despite growth, how can this be explained? The answers to these questions differ, of course, according to the national setting and the degree of national economic development. But there are also striking commonalities in historical experience. These commonalities are discussed in the first chapter which endeavours to draw together findings from the developed world to provide a synthesis.

The diagnosis for developing countries is, if anything, more risky than generalisations about developed nations. For there is great variability in settings, including within continents. While participation in post-compulsory education is generally much lower, there are also major problems in compulsory schooling, particularly in lower secondary years. Low rates of attendance reflect a combination of poor or inaccessible provision, under-investment in teachers, parental doubts about the value of prolonged schooling, direct and indirect costs shouldered by families, and frequently poor facilities. Historical patterns of public investment in some cases display a marked 'elite bias' (as in India), with the result that the most well-resourced levels of education also tend to be the least accessible, a phenomenon by no means foreign to economically advanced nations.

But developing countries also display processes of inequality which show all the signs of cultural borrowing, were it not fairly clear that policies have often been 'loaned' through international funding agencies. This applies to the emphasis on privatisation and decentralised and devolved school administration. Comparative studies on the relationship between education and growth suggest that education may be a source of *increasing* inequality. For income growth is unequally distributed and finances participation in expensive and relatively inaccessible levels of education, beginning with secondary school. Latin America is a case in point (Cornia 2005: 11). The population is actually divided by educational development. The vehicles for this are not simply the higher incomes of a minority, enabling them to exploit pre-existing advantages of urban location and family culture. They include 'elite preparatory' establishments which have acquired a new lease of life — private (including confessional) schools and universities, mediocre in the past, but turned into engines of academic competition to assist newer mobile middle classes as well as traditional clients, not only to distance their children from the poor of their own countries, but to remove their children to wealthier countries.

Poverty, unrelieved by effective policies in health, employment, housing and transport, limits the mass of the population to schools whose effectiveness in relative terms has become the focus of international aid programs. These stress school autonomy, improved management and accountability, and re-skilling of the teaching

force — all derived from the mantra of the west — while on the other hand structural adjustment programs (SAPs) reduce public investment and limit the capacity of government to tackle poverty, its causes and its effects.

The studies in Volume Two extend the theoretical concerns with social inequality in education to a range of other national contexts and across different levels of education or with a focus on particular groups. For example, Ball and Vincent explore differences in middle class family preferences for infant school in London, while Smolentseva examines the sources of social inequality in higher education in post-Soviet Russia. Region is a major dimension in the stratification of educational opportunity in China, and Lamb and Guo provide an in-depth view of how inequality operates in one of the most populous provinces. Mickelson demonstrates how expanding opportunities through racial desegregation in American high schools has been countered and frustrated by racial segregation through tracking within schools. Gender differences in education are viewed from different empirical and theoretical angles in a series of papers, including several on England. These provide detailed national treatments of the issue of gender, in some cases focussing on a ‘high stakes’ area of the curriculum such as mathematics and sciences (as in the van Langen and Dekkers’ study of the Netherlands), in other cases working more broadly on opportunities and outcomes across the curriculum.

Volume Three brings together a series of studies which examine the impact of public policy on social inequalities in education. How well do the environments created by policy work from the perspective of the gaps in opportunities and outcomes between groups? How successful have policies of ‘marketisation’ been, including in different national contexts? Papers by Lamb (Australia), Croxford and Raffe (United Kingdom), and Hsieh and Urquiola (Chile) offer empirical investigations of policies, all of which have been based on the argument that both quality and equity can be advanced by ‘liberating the market’. Beyond school education, Goldrick-Rab investigates whether in the United States very high participation rates in higher education are matched by greater equity or by sharp differentiation in quality and outcomes? More broadly, the last volume reflects on policy experience in the domain of equity, including several retrospective pieces (Driessen and Dekkers for the Netherlands, Thomson for Australia) and a study by Dubet and Duru which, while recognising inherent tensions in the concepts of equity and merit, argues for a stress on the needs of the most disadvantaged groups. This emphasis takes us back to the Coleman report (1966) — which, in effect, made the test of an education system the outcomes of the poorest groups. A final chapter by Teese and Lamb explores in broad outline the scope for policy intervention arising from the analyses of educational inequality presented in this book.

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# 1 Time and Space in the Reproduction of Educational Inequality

*Richard Teese*

## INTRODUCTION

It is characteristic of the richer nations of the world that after half a century of heavy investment in education there should still be very marked social inequalities in opportunities and outcomes (UNICEF 2002). The intense activity that accompanied post Second World War reconstruction and sustained economic growth up to the mid-1970s created expansive structures in many European countries. These would support prolonged schooling and wide use of tertiary education long after growth had faltered and unemployment had returned as a constant source of uncertainty. Once fuelled by rising incomes and rising aspirations, participation in post-compulsory education and training continued to increase in the last decades of the twentieth-century. The aim was to build a 'new economy' of high technology, sophisticated services and high productivity to exploit the emerging global environment. But studies of trends in social inequality covering much of the post-war period show remarkable stability and a seeming imperviousness to the policy effort to drive up participation and boost quality and equity (Blossfeld and Shavit 1993; Gamoran 2001; Gamoran and Long \*2007).<sup>1</sup>

Why have rich nations been so poorly rewarded in their efforts to translate mass participation into social equality? We will argue that while rich nations have indeed invested heavily in education, they have not dismantled the structural barriers which block greater equity in access and outcomes. This is despite the fact that economic dependence on successful schooling has become generalised, making equity more, not less important. Moreover, social resistance to reform has grown and frequently been supported by governments, enabling education systems to be used as structures of relative advantage rather than as structures of equity. In short public commitment has been conditional and ambivalent. Governments have encouraged greater overall participation, but not necessarily the qualitative changes needed to reduce major gaps in achievement and opportunity. They have kept structures of social differentiation in place and have encouraged, if not financed the efforts of socially more advantaged families to maintain an edge. At the same time, private spending has risen to finance the pursuit of advantage and to exploit the socially

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1 Citations preceded by an asterisk (\*) refer to chapters published in this book. Details are listed in the references section.

discriminating structures of school systems, curriculum, and tertiary pathways maintained by government.

National and comparative international studies show a consistent pattern across rich nations in which macro-economic pressures towards educational growth are countered by hierarchical institutional arrangements, the institutionalisation of conservative academic values, socio-spatial structures which control the distribution of financial, cultural and pedagogical resources 'on the ground', and family strategies which target both institutional and geographical hierarchies to secure competitive advantages through education.

#### FAMILY BACKGROUND AND INEQUALITIES IN PRIMARY EDUCATION

Social inequalities in achievement are manifest from the earliest years of school and indeed from the earliest years of childhood itself (Duru-Bellat \*2007). The most seminal work in social theory has focussed on how home advantages of education are communicated during these formative years through an emphasis on early speech development, verbalisation, cognitive stimulation through structured play, quality interaction with parents, and continuous attention to health issues (nutrition, signs of illness, supervision of needs, physical activity, medical support).

Social differences in speech development have received the most theoretical attention, especially through the work of Bernstein (1973). If the formalisation of speech patterns in a system of codes has been contested, the concept of a fundamental difference in orientation to the use of language has been a lasting legacy of Bernstein's research. The relative importance of speech as one tool of communication, how speech should be used in terms of intended effects, the qualities of the speech that a child does use, and the impact on self-concept and cognitive growth of using a particular style of speech figure prominently in theories of differential attainment in school, most notably in the work of Bourdieu (Bourdieu and Passeron 1970; Bourdieu, Passeron and de Saint Martin 1994).

Personal differentiation through a formal style of speech rewards the middle-class child with an expanded repertoire of skills — ensuring more success on school tasks, more teacher attention, and more satisfaction — but at the same time aligns the child's training at home with the formal emphasis on language mastery in school. Language is made an explicit object of study (Karpova 1977: 5; Lahire 2000: 133-134). Speech has to be produced as if it were writing, thus cultivating the impersonal subjectivity of the adult through explicit reflection on the structure of language (Bernstein and Henderson 1973: 40; Bourdieu and Passeron 1977: 117-118).

If Bernstein saw this as the growth of the rational subject acquiring universal meanings, Bourdieu's research on the language of university teachers and students pointed to a culture of personal distinction, based on academic values — management of literary form and convention, display of erudition, correctness in construction, stylistic variation, masking of meaning, subtlety, and mastery of an authoritative perspective or voice (Bourdieu, Passeron and de Saint Martin 1994). It was an ethos of distinction — a particular outlook of mind or *habitus* that makes a

child ‘special’ (above all, precocious) — that drove more advantaged parents in their child-rearing behaviour, not only in language, but in leisure habits, homework, choice of friends, choice of school, and in values and aspirations (for a discussion of how upper middle-class children accumulate both “diffuse” and “explicit” support from their families, see Bourdieu 1989: 34-36).

Research focussed directly on childhood itself and on social differences in child-rearing — rather than on the manifestations of these differences at a much later point in school careers — has tended to confirm this picture. Studying the daily lives of children, Annette Lareau shows how upper middle-class parents are much better positioned than working-class parents to address the demands of school. They understand the “diagnostic and instructional language” of teachers and the classroom learning tasks set for children, they are able to manage the needs of low achievers, they are self-confident, and network with other well-educated people, including professionals (Lareau 2000: 171-180). Besides this “competence” in their dealings with school and with educational needs, they enjoy high social status — at least equal to that of teachers — and are confident in their relationships with teachers, including the legitimate role they have in intervening in school and classroom issues. Upper middle-class parents have high incomes and substantial material possessions, their working lives train them in personal and communication skills as well as enriching their knowledge and reinforcing their aspirations and expectations, and their social networks are major conduits of information and moral and practical support.

Differences in child-rearing behaviour suggest a contrastive pattern in which middle-class parents engage in a “concerted cultivation” of their children, involving planned and supervised activities which emphasise cognitive and social growth. Home life exhibits a “relentless focus on reasoning and negotiation”. Working-class parents, on the other hand, adopt an approach which Lareau terms the “accomplishment of natural growth” (Lareau 2003: 238-239). More emphasis is placed on spontaneity and freedom and on the integrity of the world of childhood as a domain which should not be rationalised and engineered, where children are left more to themselves, and are regarded more completely as children, the boundaries between them and adults being more firmly drawn.

It is the mobilisation or “activation” of cultural capital (Lareau 2000: 180) which underlies the earliest manifestations of social inequalities in achievement. This includes earlier and more sustained use of pre-school and different expectations regarding quality of childcare and kindergarten (see Ball and Vincent \*2007). It also involves more confident and continuous intervention during primary school, beginning with the choice of school itself. Able to marshal more resources, middle-class parents are also more oriented to a differentiation of their children as achievers and more disposed to see in them the “precociousness” (or “giftedness”) that has grown up as an ideology, resting on bureaucratised schooling and its age-for-grade normative comparisons (Bourdieu 1989: 35). Educated parents create a distance in learning, aptitude and disposition between their children and those from other families, using either the same neighbourhood school environment or more segregated settings.



As a system, primary schooling fails to prevent initial gaps in achievement from widening still further through the impact of “concerted cultivation”, on the one hand, and on the other hand the relative weakness of “natural growth” as a strategy for engaging with school. However, as will be seen further below, the widening gap can occur because the primary school system itself is composed of multiple, unequal sites. Through the influence of urban residential differences or rural isolation and impoverishment, this unequal system gives full rein to family strategies for advancement as well as family weaknesses in child-rearing and institutional connectedness.

## LOWER SECONDARY EDUCATION

### *Children entering a subject-centred world*

If, in primary school, children generally attend the same class and have the same teacher for all areas of their program at a particular year-level, in junior secondary school, they encounter specialist teachers in different subjects, even while following a generally common program. This leads to a fragmentation of the perspective within which a child is viewed and also potentially of how well a child’s overall progress and needs are monitored. The child is exposed to differential assessment from the different angles represented by discrete fields of knowledge. The rotating focus of different school subjects, each with its own requirements and cognitive emphasis, intensifies the scrutiny to which the child is subject, while inhibiting the possibilities of intervention based on a global view. In effect, there are more points at which a child can experience failure. Moreover, the points at which low achievement does occur are now considered in terms of fitness for the specialised academic work to come in upper secondary education. Achievement is seen against the background of potentialities in the curriculum—the various programs, streams or tracks which eventually separate students. The prospective assessment of children — weighing up their likely success in different subjects at higher levels — is also a ranking against a hierarchy within the curriculum. For subjects are not ‘different, but equal’, and performance in some subjects (such as mathematics) is typically considered more important than performance in others.

Relative achievement in different subject areas in lower secondary education is more acutely viewed, the more the curriculum in upper secondary school is differentiated into streams or programs with known differences in outcomes as well as in prestige or reputation. Junior high school has to bear the weight of this hierarchical structure. Where the majority of children progress to the different locations in this structure, immense backward pressure is placed on the compulsory years of lower secondary education.

In effect, these become a battleground of social positioning, on the one hand, and academic positioning, on the other. The most well-educated parents seek to secure educational advantages during this stage in the form of subject options, ability-streamed classes, and socially-segregated schools. Their interventions in their children’s scholastic progress and learning at home are more intense and continue a

pattern established from early childhood (Lareau 2000, 2003). Teachers, for their part, have less room to move in dealing with individual differences of aptitude and motivation. They are conscious of the more specialised and intensive cognitive demands that will be placed on young people as they enter upper secondary education, and on the other hand find a more or less large range in the level of academic preparedness of children beginning lower secondary education. Teachers at this level are caught between the failure of primary school to eliminate social differences in achievement, on the one hand, and on the other hand the demands of upper secondary education for students to be effectively oriented and prepared for academically differentiated programs. With pressures from below (range of student achievement) and pressures from above (hierarchy of program demands), junior high school threatens to become a trap, depending on geographical location. It is not surprising that in nations with very hierarchical structures of upper secondary education and high reliance on qualifications, this intermediate level of schooling should be the site of the most acute interest and anxiety.

But in other countries with less complex structures of upper secondary education, the junior years of secondary education also tend to be marked by widening achievement gaps, student disengagement, teacher malaise, and drop-out. Spain is an example of a late-reforming country with a common program of compulsory secondary education. It is this phase of schooling which has proved most difficult to democratise. Every fourth child fails the program (Calero \*2007). This does not happen through national or regional school leaving examinations, but through teacher-based assessment at the level of the individual school. In other words, it is a cultural process rather than a bureaucratically-engineered outcome. But on the other hand it is a process conditioned by a bureaucratic structure, the curriculum of the *Bachillerato* (academic upper secondary education) and the rules of progression which deny access for low achievers even to intermediate vocational studies in senior high school.

Calero compares this structure to a “bottleneck”. *Bachillerato* programs predispose teachers in the junior secondary years to discrimination and selection. For although this intermediate phase of schooling has its own objectives and is intended to be socially inclusive, it is also preparatory and is delivered in schools in which senior academic programs dominate perspectives and monopolise prestige. The teachers themselves are the products of this system (Bourdieu 1966: 337) and they owe their status to their subject-expertise. Hierarchy of programs again supplies the framework within which a cultural process of selection, based on academic judgement and student discouragement, is free to operate. The high failure rate in compulsory secondary education protects academic programs from new populations who, for good measure, are also stopped from diluting the standard of vocational programs, if basic learning objectives have not been met.

But there is another cultural process at work here as well. This is student self-selection. Students from rural and working-class backgrounds may see little relevance in post-compulsory education if the programs remain conservatively academic and oriented to university education, especially when doubts exist about the economic gain from a university degree. If economic doubts also surround

school-based vocational training (as an alternative to academic studies), the incentives for committed study *during the junior secondary years* will also be weaker on top of the damage caused by low prestige. Thus curriculum structure operates both through teacher behaviour and student behaviour to differentiate individuals. It offers not only a set of opportunities of uneven value on objective indicators (such as access to good jobs), but a social code of interpretation which enables teachers to judge students, and students to judge themselves.

#### CURRICULUM AS A SOURCE OF COGNITIVE AND CULTURAL DEMANDS ON STUDENTS

The importance of curriculum stream as a vehicle of social selection has been highlighted in one of the most influential works in the social theory of education, *Reproduction*, by Bourdieu and Passeron. In a passage too frequently overlooked by writers who emphasise the cultural capital and ethos of students in determining selection, Bourdieu and Passeron argue that social disadvantage in education is “mainly relayed by stream guidance and placement (*orientations scolaires*)” (Bourdieu and Passeron 1970: 106). In a complex chart, the authors map the processes of differential social selection through the hierarchical curriculum of the French education system (Bourdieu and Passeron 1977: 87, 254; see also, on the multiplier effect of academic stream, Bourdieu and Passeron 1964: 26).

Each subject in a curriculum can be viewed as embodying a set of demands on students or as requiring a set of behaviours (Bourdieu 1970: 91; 1973: 494; 1989: ch.2). Demands on what a student is expected to learn can be quite specific — e.g., “Set up and solve systems of simultaneous linear equations up to four unknowns” (VCAA 2005a: 68) — or much more diffuse, e.g., “Identify and comment on the significance of events and structural aspects of the texts [as studied in literature]” (VCAA 2005b: 13). Analysis of the reflections of examiners on student papers suggests that besides the specialist cognitive demands made by school subjects, there are generic cognitive demands which school subjects impose on students through specific subject-matter (see Teese, 2000).

The high-end subjects of the academic curriculum typically have rich theoretical content. They demand attention to principles, laws, social or historical processes, mathematical, statistical and grammatical ideas, and require abstraction from content to concept. Whether in sciences, mathematics or the humanities, the emphasis is on identifying and understanding relationships, detecting and interpreting patterns, reasoning logically, justifying arguments and conclusions. Students must master the academic conventions and rules governing behaviour in a subject, and in the first place accept a subject on its own terms, without requiring relevance or real-world meaning or application.

Intellectual training through school subjects imposes cultural demands on students’ language mastery and depends on acceptance of the ‘rules of the game’ (in the absence of clear purpose or meaning). It also requires confidence in learning, pride in achievement, a desire for distinction through achievement and the capacity to concentrate for long periods of time, to memorise masses of detail, and to marshal

learning from different points in a pedagogical sequence (or from different branches of study).

It is because the more academic subjects make these generic cognitive and cultural demands that they supply the basis for exercising social advantages, given the uneven distribution of cultural capital, educational know-how and emphasis in child-rearing practices in a stratified society. And it is for this reason that educated middle-class parents demand ‘hard’, not ‘soft’ subjects for their children. For these subjects exploit the educational investment continually made by parents and provide the greatest potential for academic discrimination.

Schools serving these parents have the same point of view. When examination results for the General Certificate of Secondary Education (GCSE) were released in 2005, showing that 57 per cent of all papers submitted by pupils in independent schools received top grades, the general secretary of the Independent Schools Council responded that his sector had “concerns about the usefulness of some coursework” and the GCSEs’ “capacity to stretch pupils at *all* levels of ability” (emphasis added) (*The Independent*, 3 September 2005). The role of school subjects is to open and continuously extend the academic distance between pupils by maximising demands on the brightest. Curriculum structure provides the framework for ordering the cognitive demands on students into a hierarchy of programs or subjects which, by excluding no group, ensures that all can be ranked in strictly meritorious terms.

#### SOCIAL SELECTION THROUGH THE UPPER SECONDARY CURRICULUM

Duru-Bellat (\*2007) observes that the children of tertiary-educated professionals and senior managers are ten times more likely than the children of unskilled manual and service workers to enter the prestigious ‘S’ science stream of the French baccalaureat. The academic hierarchy of streams or sections provides a frame of reference within which the potential of every child is assessed and it also operates as a target structure for mobilising and directing family resources. Hierarchies, such as the baccalaureat, also contain the streams of relegation — invariably vocational or low-prestige technical — which absorb children judged too weak to manage the cognitive demands of high-end academic subjects.

A striking feature of the curriculum structures which perform the role of social sorting is their persistence over time, despite constant modification. Numerous examples of great stability can be found. These can be demonstrated in contexts in which there is a rapid change in school participation, with curriculum structure — even when reformed — constantly shaping and differentiating activity as if its purpose were to preserve social relativities in opportunities and outcomes rather than reducing them.

Two examples from widely different national settings make the point. Curriculum in upper secondary education in Australia is generally informally structured, without sharp divisions in streams or tracks, even though the last decade has seen very strong growth in vocational options (Teese and Polesel 2003; Teese \*2007). Instead of formal streams, there is a subject hierarchy. The stability of this

hierarchy can be measured along a number of dimensions, such as relative socio-economic status (SES) and relative overall achievement. Looking just at the average social level of students attempting a subject, the relative position of senior school subjects in social space that were part of the curriculum in both 1975 and 2000 changed very little over a quarter of a century, during which the proportion of the age-group completing school rose from around 33 per cent to over 80 per cent. The average SES of a subject in 1975 provides a very good predictor of the average SES of a subject twenty-five years later ( $n=21$ ,  $r=.800$ ).

Many changes occurred over this interval, not only in the level of participation, but in the range of subjects available to students. The curriculum was flooded with new subjects of a general or vocational kind, intended to meet the needs of young people who were not going to university, though also taken often in large numbers by students who were academically oriented. The subjects at the top of the hierarchy (Latin, French, German), then somewhat lower (the physical sciences, preparatory mathematics, the traditional humanities) could not have maintained their relative position in social space had they not continued to deliver the benefits of academic discrimination, benefits more needed than ever before in a context of growing mass participation. They could continue to play this role, not simply because educated parents are conservative and want 'hard options' for their children or because universities want suitable specialist preparation and encourage or require students to take the most canonical subjects, but because these subjects are part of a cultural system. Each in its own way crystallises a view about human worth and agency, about self-distinction and style of life through academic merit, about teaching as a kind of anointment and learning as a rite of passage, so that the secondary teacher must be a subject expert and can relate to the student only to the extent that the student relates well to the subject, obeys it, and surrenders to its requirements, however abstract, remote and irrelevant it may be. Only by choosing the right subjects and by doing well in the right subjects can a student create the distance needed for distinction from the next student. It is the capacity to fulfil this requirement and thus authorise an ongoing process of selection against the rising tide of participation that accounts for the resistance of curriculum hierarchies to repeated efforts at reform.

While it has been fashionable for many years to criticise theorists, such as Bourdieu, for finding a despairing stability in patterns of social selection, the structures of curriculum which convert social into scholastic power appear to be even more fashionable than the criticism which objects to finding them. Changes in form belie stability in function, but also the accumulation of multiple functions. Thus the reforms to the French baccalaureat in the mid-1960s allowed major expansion to occur up to the early 1980s, while at the same time preserving the advantages enjoyed by the most well-educated families (Prost 1983: 17-21). By 1980-81, as many as 54 per cent of the children of higher professional and senior managers were concentrated in the-then elite 'C' science stream, while only about a fifth of the working-class children who did reach upper secondary education were enrolled in this stream (Prost 1983: 20).

The essential feature of curriculum structure is its susceptibility to social and academic manipulation. Growth can be absorbed without damaging the underlying

social flow of benefits. Working-class children have greater chances today of undertaking upper secondary education in France, but at the price of accepting a lower place in the program structure, and while in this important respect the structure is expansive, it also contains ample facility for the social differentiation necessary to restrict access to the elite streams of higher education in France.

### RACE-BASED SEGREGATION THROUGH THE CURRICULUM

It is not only differentiation along social lines that operates through structures such as streams or tracks or more informal, but equally discriminating subject hierarchies. In her study of Charlotte-Mecklenburg public schools in North Carolina, Mickelson (\*2007) shows how high school tracks operate as a “second generation” mechanism of segregation along race lines. African-American students were found to have suffered relegation to lower tracks more frequently than white students, even after controlling for prior achievement, family background and other individual attributes. Track assignment policies were discriminatory and undermined the potentially beneficial effects of school desegregation.

The effects were to lower average achievement for black Americans and to deny them access to the advantages of successful study in academic programs. Conversely, the results of Mickelson’s study can be read as implying that track placement decisions significantly enhance the opportunities of white students in four distinct, but related ways. Assignment to higher tracks is associated with improved overall student achievement as measured by standardised tests. White students gain access more frequently to subjects of high cognitive demand — more challenging opportunities. This is important not only for cognitive growth, but for the capacity for self-distinction through academic merit. At the same time, they are likely to have access to better teaching resources if, that is, schools assign their best teachers to higher tracks. Finally, white students also secure better access to peer cultural resources through higher track placement. They are likely to mix more with successful students and young people who have high aspirations as well as greater academic self-esteem. If these advantages do indeed flow to white students — who are exposed to less severe academic selection in the first place — then the hierarchy of tracks in the American high school system functions as a powerful vehicle for differentially allocating both teacher and pupil resources in formally desegregated settings and thus contributing to the perpetuation of race-based inequalities.

### GENDER IDENTITY AND THE CURRICULUM

If the hierarchy of the curriculum provides a framework for social differentiation and for the exercise of social power through academic distinction, it also provides abundant opportunities for gender differentiation. The curriculum is commonly regarded as a set of unequally segmented zones, each at its own stage of partial colonisation by girls, reaching back to the time when girls began to complete school as often as boys and also began to challenge boys in male-dominated territory. As girls have gradually ‘caught up’, a reverse view has gained ground according to

which boys are the 'new disadvantaged'. They are more frequently in trouble with teachers, they complete school less often, their performance is apparently weaker, and they enter university less often (see Epstein et al. 2002). Claim and counter-claim are exchanged without asking a basic question *which* boys, *which* girls? (Teese et al. 1995: 109; for a review of gender differences, see Smyth \*2007).

But, equally, investigations of relative advantage are too often conducted at a general level, without exploring the role of different subjects or streams in a curriculum hierarchy (Teese et al. 1995: 91). The curriculum is used to differentially construct gender, but at the same time as it is used to express and differentiate social class through the medium of academic position and performance. There is no separate channel or medium through which gender can be constructed independently of the fashioning of social class differences through the academic materials furnished by school. Consequently, any relative gender differences in access or achievement have to be seen in terms of the way the curriculum operates as a social system which creates gender identities only to the extent that it creates social inequalities.

The hierarchy of the curriculum enables a fashioning of gender differences to occur at the high end of the subject range which is *class integrative*. In other words, differences in the likelihood of girls or boys taking 'high-end' subjects, while involving significant relative disadvantages, tend to cement social relationships within a status culture, ensuring that both boys and girls share in the benefits of an educated life-style and on a more equal footing than happens amongst young working-class people.

Literature, to take a major example of a gender-segmented subject, is taken much more often by upper socio-economic status girls than by their male peers. While this might be considered a kind of relegation or compensation for exclusion from other high-status subjects dominated by boys (e.g., physics), it is also an important avenue of competitive academic success as well as laying the basis for a claim for inclusion and equality in a status culture. Literary and artistic sensibility is a distinctive element of the culture of well-educated young women. It is part of their intellectual training, which they frequently continue in university and often pursue as teachers. It is part of what makes them, not simply women, but well-educated women, and it is thanks to this that they are able to make a claim for equal respect amongst their class peers, a respect based on difference or specific 'excellence'. Through this and other relative differences of schooled culture (e.g., art), bonds are fashioned between women of the same class (or class fraction), but also between men and women. It is in part through these relative oppositions that a distinctive symbolic order of affirmations — identities resting on the collective experiences of achievement, but in divergent fields — that the bonds of class homogamy in marriage are also formed.

More fundamental to integration in a status culture, however, is the high general level of achievement which is produced through participation in the academic high end of the curriculum and which enables relative differences in specialist fields, such as literature and art, to be asserted. While the specific cognitive demands of school subjects differ greatly — in terms of subject-matter, concepts, problems, procedures and assessment practice — the generic cognitive and cultural demands are shared (Teese 2000). Meeting these demands — through the "insensible

familiarisation” of family education (Bourdieu 1966; 1989: 34-36) and then through formal instructional experiences in school which repay family effort and implicitly presuppose it — produces a common foundation of assumptions, dispositions, preferences and basic values — in short, a *habitus*. This, for all the relative differences of scientific, business or literary emphasis, lies at the centre of an educated style of life and class membership (for the concept of *habitus*, see Thompson 1991: 12-14).

Access to high-end subjects enables girls from educated backgrounds to reach a general level of attainment which, even though more focussed on the literary curriculum, ensures that they can integrate into a status culture as *individuals*, not as members of a subordinate sex. In some high-end subjects, such as chemistry, they participate as often as boys and have greatly reduced the gender gap, while other subjects at this level of the curriculum remain highly segmented, with girls matching the success of boys only through a considerable trade-off in the form of lower participation (e.g., physics). Even in some high-end subjects where there is only a small gender gap in enrolment, as in preparatory mathematics, there remain continuing gaps in *competitive* (though not average) achievement favourable to boys. However, girls from the most well-educated families make up ground through a range of humanities subjects which are academically discriminating, which they dominate, and which contribute to an assertion of individuality in which gender becomes a positive source of difference rather than a negation.

The question is whether the curriculum hierarchy *at all its levels* offers this facility. Subjects in the lower ranges accommodate low achievers. Vocational and modern general subjects are not vehicles for asserting academic ‘excellence’ (domination), that is, for converting social into academic power. There is no ‘vocational’ equivalent for achieving personal distinction through the collective resources accumulated historically in the curriculum and geographically in the selective schools which monopolise the curriculum. Because working-class students have much weaker access to the socially-sanctioned means of personal distinction which the curriculum provides, it is also more difficult for them to check gender-based assumptions and expectations and to resist the experience of social classification which associates cultural with biological characteristics and which generalises across individuals as if they were indistinct members of a sex. The curriculum favours this process through gender-segmented classrooms set up to deliver it in which low achievers experience segregation along gender lines, based on academic relegation, but rationalised with reference to gender (“I’m just a girl”, “that’s a boy’s subject”).

Academic failure intensifies the grip of gender, while success relaxes it. There are numerous subjects at the high end of the curriculum which are gender-segmented, particularly in the humanities, but also in mathematics and science. But the girls who take these subjects are frequently high achievers who assert their strengths — especially expressive and literary — to gain competitive advantages over all boys, including boys of their own class, as well as all other girls. This is what admits them to their class on a more equal footing than happens amongst lower working-class families. Girls from high-status families trump gender with class, and



through this assert their individuality. This is the opposite experience to working-class girls who are demoted on academic grounds and end up in segregated areas of the curriculum complete with a gender rationale and identity which dominate their horizons. But are working-class boys in any better position?

#### THE ARTICULATION OF THE SCHOOL CURRICULUM WITH HIGHER EDUCATION

Different national examples show that curriculum structure acts as a source of social resistance to educational growth and to a more equal diffusion of the benefits of growth. The mass expansion of secondary education is checked in its social effects by the vertical hierarchy of school programs, which admit growth, but not redistribution of benefits. But even if — as in France — curriculum structure does absorb much of the pressure of rising demand, massification still threatens access to the benefits of higher education. This is because the curriculum continues to create opportunities for further study, even if these are of very unequal real and perceived value. Thus, to continue with the French example, some 20 per cent of young people who enrol in the prestigious ‘S’ science stream of the baccalaureat gain entry to the preparatory classes of the *grandes écoles*, while those in the arts (*L*) and economics and social science (*ES*) streams have only about a 6-7 per cent chance (MEN 2002: 181). The great majority of students in the less prestigious streams enter the university system, which is an ‘open’ (non-selective), not a ‘closed’ sector. Here their academic origins — beginning with the stream of the baccalaureat in which they were enrolled — will influence whether they complete their first degree and to an extent also how long it will take them to find full-time work, if they do graduate. Of the approximately 100,000 young people who each year drop out of university in France, 60 per cent come from the vocational stream, 30 per cent from the technological stream, and 10 per cent from the general baccalaureat (*Le Monde, Sélection hebdomadaire*, 8 July 2006: 7).

The formation of institutional and course hierarchies in higher education builds on stream, track and subject hierarchies in upper secondary education. Higher education courses and institutions play a selective and segregative role, extending on the curriculum of secondary schools. It is through the maintenance of differences between higher education courses that social advantages are conserved and exploited.

Course differences are, in the first place, academic — relating to entry standards, such as minimum scores and prerequisite studies or institutionally preferred options (languages, mathematics). But there are also economic aspects which make institutions or courses more or less accessible, such as geographical location, length of training, relative costs of living, and tuition or enrolment fees. If young people have been successful in utilising the curriculum hierarchy of upper secondary education — gaining access to the intellectual resources (subjects), the pedagogical and the peer-cultural resources concentrated at the high end — they can lower the economic costs of higher education (through scholarships) as well as maximising the range of options open to them through outstanding academic performance. They will also access courses in higher education which are generally much better resourced

either because they are private foundations or state institutions with rich endowments or institutions on which the State spends lavishly (e.g., in France, 30 per cent of the total budget for higher education is spent on a sector which accommodates only about 4 per cent of all tertiary students) (Renaut 2002: 81). If high school students are less successful, they can expect to access lower prestige and less well-funded institutions, and their progress through higher education will also be more problematic (Goldrick-Rab \*2007). Students from working-class and ethnic backgrounds, even if quite successful at school, aim at lower status tertiary institutions and are deflected from higher status ones through the symbolic as well as the bureaucratic protections which these enjoy. Reay (\*2007) concludes that global increases in access to higher education in England have meant “increasing access, not for high achieving working class students, but for those middle class students who would not have considered university twenty, even ten years ago”.

If the uncertainty of employment outcomes intensifies the demand on the part of students and their families to differentiate between courses and between universities offering the same courses, the institutions themselves are locked in a struggle to recruit those students (and staff) who will add most to their ‘brand’. Institutional differentiation along prestige lines exerts a downward vertical pressure on how secondary schools perform and on the academic curriculum itself as a vehicle of student and school differentiation. In those national systems where universities are free to select, entry standards become the target for those secondary *schools* that are free to select. A symbiotic relationship emerges in which elite universities measure success by the narrowness of their student recruitment (which in turn narrows their *school* base), while conversely the elite secondary schools measure success by the narrowness of their students’ institutional trajectories.

High intake standards trigger another process which operates to protect and reinforce institutional hierarchies in higher education. Where universities are allowed to select, bidding by students is influenced by perceptions of relative ability, not only by the published intake standards of institutions themselves. But student (and teacher) perceptions of ability are in turn influenced by the *relative institutional proximity* of universities and schools. Where this proximity is high — as in the symbiosis of elite universities and elite secondary schools — confidence in the accessibility of places in high-demand courses is greater, while it is lower in contexts in which institutional connectedness is weaker or remote. Students with high ability, but from poorer backgrounds, tend to exclude themselves in bidding wars or to be more frequently encouraged by their teachers to lower their sights (for a report on provisional allocation of places in British higher education, relying on predicted grades, see *The Independent*, 9 Sep 2005, and *The Times*, 9 Sep 2005). Self-selection adds to the social impact of selection by grades. A similar phenomenon, though involving different admissions practices and a different structure of higher education, can be seen in France where, at a given level of academic performance, students from poorer backgrounds will exclude themselves from opportunities that their academic peers from better-off families are more confident of gaining (Duru-Bellat \*2007).

Course and institutional hierarchies in higher education are linked in multiple ways with curriculum hierarchies in secondary education, and the maintenance of these links is vital to the conservation and reproduction of social advantage. First-year courses in university are more or less closely aligned with final-year courses in upper secondary education, and in some cases (e.g., mathematics, statistics) are virtual re-runs. In the 'hard' disciplines, the power of university academics over the syllabuses used in schools is decisive, whether this is exercised through examinations boards or committees which are formally parts of education departments or politically through manipulation of key constituencies. Again, it is academics who provide the general undergraduate training of the students who will one day become secondary teachers, generally after a short and discipline-focussed professional program which will do little to counter the influence of three to four years of conservative university teaching (Teese 2006: 94-97). The symbiosis of elite universities or institutes and elite secondary schools is thus only an extreme manifestation of an institutional system which is far wider and more embracing and is so deeply intertwined across its various levels that it functions as a cultural system. Identities are formed and reinforced by relative differentiation through a curriculum which actually has no decisive break between secondary and tertiary levels. Subjects, marks in subjects, national competitions in subjects, courses to which subjects lead, courses that repeat subjects, students returning as teachers to the same subjects, are all sources of institutional seamlessness.

Research into inequalities in education tends to focus on contemporary barriers to opportunities and on patterns of outcomes. It is concerned with the relative position of individuals and groups in social and institutional space — the neighbourhoods or communities in which they live and the schools they attend — and the chances of success and failure associated with their position. But the potential or value of each position has to be seen in the context of the cultural system of the curriculum to which individuals or groups seek access from their diverse locations. Compared to these locations, the cultural order of the curriculum appears as a constant element of the environment, of inherently less interest than the play of social forces occurring across and within the contemporary sites of neighbourhood and school. The curriculum slips into the background and is not infrequently seen as unproblematic. It becomes, as it were, merely the historical premise for the family strategies and government policies which claim all attention. Yet the pervasive effects of the curriculum, the values it contains, their expression in knowledge hierarchies, and the durability of these hierarchies as cultural systems all point to the living force of history, to time as social power accumulated and codified in systems of ideas and concepts, data and arguments, and the demands, both cognitive and cultural, which express these as forms of power and are imposed on each new generation of students.

Time in the form of objectified and institutionalised values — merit, talent, giftedness, formal equity, excellence — obscures its own influence through the universal character which these values acquire in the action of the institutions which champion them. The long history of these institutions, above all universities, recesses them and pushes into the foreground the more transitory and contingent elements, the schools that come and go, schools that have no history, the housing

estates, the slums of flotsam and jetsam and their fleeting moments in the media (violence, riots). If, now, we turn to the space that these elements constitute, we should not forget that all of the conflict and movement between them takes place within the framework of this long and self-obscuring history and that inequality is a product, not only of space, but of time.

#### ARRANGEMENTS 'ON THE GROUND'

If school subjects and higher education courses represent a vertical hierarchy of conceptual demands and specialist knowledge, access to this hierarchy and to the distinctions it provides depends on the nature of the school systems which serve it. Structural inequality in education arises through the interaction between the institutional hierarchy of academic courses, streams and subjects and the social and spatial hierarchy of school systems, beginning with the social geography on which these are based (Teese and Polesel 2003: 218; cf. Bourdieu 1989: 47).

National studies of educational inequality show that the delivery framework of the curriculum — school systems — is itself stratified and hierarchical, though with considerable variation between countries in how this occurs. Where public systems predominate, opportunities for differentiation of effort rest partly on residential patterns, partly on relative academic specialisation between secondary schools serving the same or adjacent areas, and partly on stream or track divisions within the same school (Persell 1977: 33). Locality, local 'divisions of labour', and internal curriculum structures provide the framework through which classroom conditions can be optimised and student effort focussed on the most discriminating areas of the curriculum. Patterns of urban residential segregation in the United States which concentrate cultural and economic advantage in suburbs (and in academic tracks within schools) and which, on the other hand, concentrate multiple disadvantage in inner city areas or in 'at risk' suburbs provide the most complete illustration of this regime (Anyon 1997; 2005).

How different populations are distributed in urban space — through property and rental values, jobs, transport, and the social distance strategies of families themselves — lays the groundwork for how populations are distributed in schools. Only a minority (17 per cent) of white neighbourhood schools in the United States have high poverty enrolments (more than one in two students classified as poor), while the reverse is true of racially-segregated minority schools, 88 per cent of which have high levels of poverty (Anyon 1997, quoting Orfield). With resources closely tied to local tax bases, urban residential segregation tends to concentrate poor and minority populations in poor and under-resourced schools, while better-off families are brought together in well-resourced schools. These are also more culturally homogeneous and more focussed on academic programs. The fact that the unequal distribution of financial resources rests on a legislative framework and on system administrative practices and priorities reminds us that the play of urban factors is as much political as economic and social. Urban space is a political outcome, not a spontaneous or un-engineered result of civil society (see Rury and Mirel 1997).

Kozol (1994) highlights the extreme deprivation which is created through processes of urban polarisation. Rich countries produce extreme poverty within their own boundaries, as the example of East St. Louis shows. But they are also able to rationalise it as a phenomenon of errant human agency (e.g. lax administration) rather than a structural feature requiring a redistribution of tax dollars and pro-poor employment, housing and transport policies to correct (see Anyon's analysis of Supreme Court records, 1997: 139-148). Public theories of educational failure such as those used to explain the widely varying resource levels in New Jersey schools typically ignore how educational 'success' is produced. They do so by isolating the phenomena of failure from the phenomena of success, and by treating the contexts in which these are produced as separate and unrelated to each other.

Many national systems, while displaying marked geographical inequalities in their public schools, add a further layer of institutional separation through subsidised private establishments. Private schools, whether confessional or not, provide an additional facility for differentiation of effort over and above the use of social geography, though the two principles may work in tandem. Again the role of private schools themselves may vary from elite establishments, with a very limited clientele, to schools which are much more socially mixed and provide an important element of flexibility and choice, without necessarily being superior in standards to the public sector. This is the case with the mainly-Catholic schools in France and Spain and in many other European countries. Finally, the private sector, while being diverse, may be large, academically competitive, and substantially publicly funded, without on the other hand having any limitations placed on it in terms of fee-levels or private income (such as in France and Spain) or recruitment. Australian private schools are an example of this approach which combines the advantages of public subsidies with the advantages of complete market freedom rather than being required, as in other countries, to trade off one against the other.

While the balance between public and private provision varies, similar functions are performed. Schools are sites for pooling and sharing resources, whether financial or cultural. Social divisions between schools split up resources and distribute these unevenly. But 'negative resources' (relative liabilities) are also distributed unequally. Poor students in urban schools are typically poor in many ways, thanks to the range of disadvantaged groups which they accommodate — minority groups, children with disabilities, poor children, refugees, pupils from broken homes or those rejected by other schools (Lamb et al., 2004: 42; Lamb and Teese 2004: 26-28).

By contrast, rich schools in urban settings may be rich in many ways — highly educated and 'connected' parents, peers with high aspirations, teachers with high expectations and specialist qualifications, resource flexibility, good equipment and facilities, and psychologists, counsellors and other support staff. Classroom conditions are created in these settings which involve the pooling of the cultural capital and ethos of individuals and the pedagogical multiplication of these advantages. Relative narrowness of intakes supports a focus on the high end of the curriculum, which in turn maximises teacher productivity as against the dispersal and weakening of effort over multiple and competing priorities in disadvantaged schools.

Different national approaches to public and private sector provision do not represent a simple dichotomy between a public sector which is 'space bound' (or geographically determined) and a private sector which is 'space free' (un-zoned and recruiting widely). Nor do they represent a simple dichotomy between a public sector which is 'system bound' (ruled by a department or local authority) and a private sector which is 'system free' (autonomous).

While private schools do represent a solution to the restrictions of zone, in fact the de-zoning of public systems has made significant inroads in countries such as England and Australia, and, to a far lesser extent, France. De-zoning is intended to release market forces and to boost quality through choice. However, the beneficiaries of this philosophy appear to be mainly the transitional or middle-classes, for whom freedom of movement within the public sector adds to a pre-existing repertoire of private options (low-fee religious schools, private non-confessional establishments) in addition to the greater residential mobility that they already have (see Duru-Bellat \*2007; Ball, Bowe and Gewirtz 1995, 1996; van Zanten 2001).

Just as public sector schools have been increasingly liberated from geography, so they have also been increasingly liberated from government administration. The push towards devolution has been strong and has led to more or less significant degrees of self-management in public systems (or at least a relaxation of public sector management, as in the case of Charter schools in the United States). Where these two tendencies are advanced — that is, both de-zoning *and* devolution — a powerful dynamic of differentiation is released into the public system. While the policy expectation has been across-the-board gains in quality, the research evidence points to a polarisation. Lamb (\*2007) shows that in the Australian state of Victoria, government schools serving the poorest urban communities have declined in size, while those serving richer urban areas have become bigger in a context of geographical and administrative deregulation. As schools contract in size, they lose resource flexibility, their program options shrink, their attractiveness to both parents and teachers falls, and their capacity to supplement government income with locally-raised revenue also declines. Conversely, as schools grow in size, they gain in the volume, range and flexibility of their teaching resources, their income base swells, they are able to offer wider program choice, and become more attractive to parents and to teachers. The underlying effects of urban residential segregation thus appear to be aggravated by de-zoning and devolution rather than ameliorated, so that deregulation acts as a mechanism of *regressive* redistribution, even in a context in which aggregate improvements in outcomes may be recorded.

The evidence of the impact of marketisation on school systems in the United Kingdom also indicates that "markets promote inequality" (Croxford and Raffé \*2007). Where market philosophy has been pursued more fully — in England — there has been no weakening in class inequality. Where, by contrast, this philosophy made less progress — in Scotland — inequalities have weakened. Croxford and Raffé conclude that the market regime in comprehensive schooling may act as a framework for conserving class advantage. This is in a context in which there is pressure on all populations to lift participation (and on all schools to lift

performance), but also pressure on already-advantaged groups to maintain superiority. One way of doing this is to intensify the pooling of resources by weakening the administrative barriers to mobility and selectivity in comprehensive systems. The reverse effects involving a concentration of disadvantage and residualisation of the poorest-performing schools can be expected to weaken competition and at least to maintain achievement gaps between rich and poor.

Looking at the experience of those countries in which de-zoning has been undertaken and possibly also devolution of management, educational outcomes suggest that public policy has extended the capacity of more educated and ambitious parents to secure competitive advantages for their children rather than extending quality learning environments to children in the poorest families. The public sector has been exposed to the same principles as formerly operated only in the private sector, and this has augmented the scope for social strategies rather than compressing inequalities. While this process of differentiation through management reform of the public sector is most visible at the level of secondary education, primary schools are also affected by the application of 'choice' (see Lamb \*2007). Parental strategies have the effect of shifting cultural resources from school to school, and either strengthening or weakening the mix of pupils at a given site (or even within a given site). Diversity, which represents a general benefit in light of the gains it delivers to poorer children, is undermined by strategies of segregation which produce smaller benefits for already-advantaged children (see Duru-Bellat \*2007 and Lupton and Thrupp \*2007).

## CONCLUSION

### *One hierarchy to address another*

If the rise of mass secondary schooling has been accompanied by an increase in the range of strategies and facilities available for the pursuit of social advantage, these represent 'on the ground' and contemporary resources whose application makes sense only in the context of the discriminating, ranking and selection work of the curriculum. The pooling of financial and cultural resources which is the essential aim of strategies of segregation — the use of private schools, migration between public schools, even in the case of some middle-class groups the choice of pre-school and childcare facilities (Ball and Vincent \*2007) — represents a collective, not purely individual response to the potentialities of the curriculum to stimulate, harvest, exploit and sanction intellectual talent. For while these strategies wear the aspect of a private decision, and are publicly supported by choice theory in this light, they are neither random nor isolated and unrelated responses. They create pooled outcomes in the form of shared operating conditions, resources and experiences. They are in fact elements of a culture of differentiation rather than the mechanical decision-making of economic agents acting independently and even against each other.

Strategic thinking and manipulation of opportunities for distinction represent a contemporary response to the emergence of threats to status position and life-style as

manifested in the changing social mix of classrooms, the loss of social distance, and the perception of competition from new populations. In this context, the curriculum grows in importance. It can be represented as an historical resource by comparison with the contemporary resources represented by the right neighbourhood, the right childcare centre, the right school or classroom. For while the curriculum does contain the threat of failure and demotion for all children, including the most privileged, the values embedded in it are a class investment over the long term and they are more accessible to the children of educated families than they are manipulable or vulnerable to the passing reform efforts of elected governments. Children from these families thus exploit both space and time — the geography of home, neighbourhood and school, and the history accumulated in the curriculum which unites multiple generations in a culture of academic domination.

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## Equality of Educational Opportunity A 40 Year Retrospective

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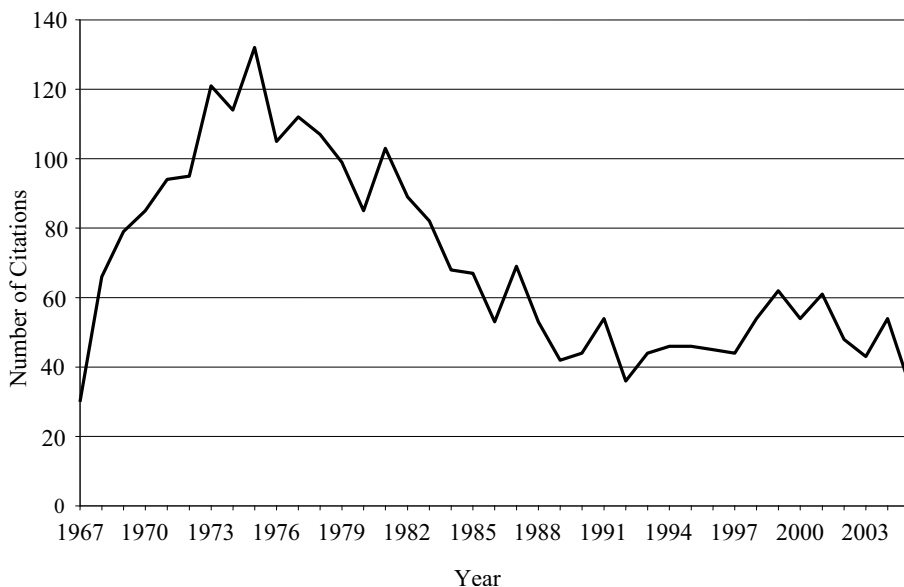
### A 40-YEAR RETROSPECTIVE

*“Guess what Coleman’s found? Schools make no difference; families make the difference.” – S. M. Lipset to D. P. Moynihan, as quoted by Hodgson (1975 p.22.)*

These words captured the popular perception of the new report by James Coleman and his colleagues, *Equality of Educational Opportunity* (Coleman *et al.*, 1966). Released on July 4, 1966, in a vain attempt to avoid publicity for what were regarded as politically intemperate findings, the report was supposed to document what most assumed to be true: poor and minority children performed poorly in school because their schools lacked resources. Instead, the Coleman report (as it became known) discovered that differences among schools in average resources were not nearly as great as expected, and the impact of school resources on student achievement was modest compared to the importance of students’ family backgrounds. Of course, this did not mean that “schools make no difference”; in fact, as subsequent research has shown, schools matter a great deal for student learning. Coleman’s findings, however, indisputably documented that variation between schools in their resource levels mattered little for variation among individual students, a result that remains the seminal finding in U.S. sociology of education.

*Equality of Educational Opportunity* (EEO) has inspired decades of research on school effects, on the impact of socioeconomic status on achievement, and on racial and ethnic disparities in academic achievement. The purpose of this chapter is to take stock of EEO from the vantage point of 40 years later. First, we examine the main findings of EEO, and consider whether they still hold in light of subsequent research and changing times. Second, we reassess the debate over whether the findings of EEO hold internationally. Third, we discuss the implications of the Coleman report and subsequent studies by Coleman for the debate over school choice and vouchers. Fourth, we discuss changes over the past 40 years in the concept of equality of educational opportunity, including conceptions embodied in contemporary education reform policies in the U.S. We conclude with comments about the implications of EEO and school effects research for the prospects of equal opportunity in education.

Since its publication, EEO has been cited in academic journal articles over 2,700 times. Figure 2.1, based on the Social Science Citation Index (1966-1981) and on a compilation of the Social Science Citation Index, the Science Citation Index, and the Arts and Humanities Citation Index (1982-2005), shows that the citation peak was in 1975, with references in 132 academic journal articles. Annual citations dropped subsequently with about 106 yearly in the 1970s, to 71 citations per year through the 1980s, to an annual average of 48 citations a year in the 1990s. In the late 1990s, citation counts rose again, and have averaged over 55 citations per year since 2000. Clearly, contemporary scholars continue to reference EEO as they pursue new work on schools and achievement.



*Figure 2.1. Citations of the Coleman Report from 1967-2005*

Note: Sources: Institute for Scientific Information, 1979a, 1979b, 1983, 1987; Thompson Scientific, 2005

### DO THE MAIN FINDINGS OF EEO STILL HOLD?

While the argument about the relative role of school resources versus family background is probably the most cited contribution of EEO, the Coleman report provided ground-breaking research in several areas, including the salience of school segregation and the size of white/minority gaps in student achievement, in addition to the effects of school resources versus family background on achievement. In this section we review Coleman's findings in each of these three areas and examine the extent to which they still pertain today.

### *School Segregation*

As expected, Coleman found that schools in the late 1960s were highly segregated. Of all racial and ethnic groups, white students were the most segregated, with 80 per cent of first grade and twelfth grade white students attending schools that were 90-100 per cent white. Among minority groups, blacks were the most segregated, with 65 per cent of black first grade students attending schools that were mostly black. The largest levels of segregation for blacks and whites were in the south. Noting that the 1954 *Brown vs. Board of Education* Supreme Court decision declared that separate schools for blacks and whites are inherently unequal, EEO reported that by this standard, "American public education remains largely unequal in most regions of the country, including all those [regions] where Negroes form any significant proportion of the population" (Coleman et al., 1966, p.3).

Racial segregation in American schools has gone through dramatic changes since the Coleman report. From 1954 through the 1970s, legal segregation was eliminated and black/white school segregation in the south dropped dramatically. In 1954, 99.99 per cent of southern blacks were enrolled in schools that were composed of 50-100 per cent minority students. This percentage declined to 86.1 per cent in 1967-1968 and reached a low of 57.1 per cent in 1986-87, but then rose to 67.3 per cent by 1998-99 (Orfield, 2001, p.29). Changes in segregation were not as sharp in the nation as a whole with the percentage of blacks enrolled in 50-100 per cent minority schools at 76.6 per cent in 1967-1968, dropping to 63.3 per cent in 1986-87, and rising to 70.2 per cent in 1998-99 (Orfield, 2001, p.33). Nationally, the percentage of blacks enrolled in 90-100 per cent minority schools was at 64.4 per cent in 1967-1968, declined to a low of 32.2 per cent in 1986-87, and rose to 36.6 per cent in 1998-99 (Orfield, 2001, p.31).

While there was a dramatic drop in school segregation in the southern U.S. and a significant decline in the proportion of blacks in 90-100 per cent minority schools in the nation as a whole, the gains in desegregation peaked in the 1980s and were partially reversed in the 1990s. Many school systems experienced resegregation in the 1990s, leading to a reversal of a large portion of the gains that occurred from 1954 to the 1980s (Orfield and Eaton, 1997). Resegregation occurred in part because of growing minority enrolments, but also because the courts have declared that school systems have moved from "dual" to "unitary" status; that is, they are no longer segregated through any action of the school system. As a result, district-wide desegregation programs have been dismantled and the schools have become more segregated (Orfield, 2001; Clotfelter, 2004; Gamoran and An, 2005).

In sum, school segregation has undergone shifting and contradictory changes over the last 40 years. In the nation as a whole, blacks are about half as likely to be located in all-black schools as they were in 1967-68. Still, more than a third are schooled in such racial isolation. Moreover, as the 21st century begins, the proportion of blacks enrolled in predominantly minority schools has nearly returned to the levels described in EEO.

*Achievement Gaps*

A major portion of EEO examined the race and ethnic gaps in student achievement. The authors found that among students who stayed in school until 12th grade, about 85 per cent of blacks scored below the average for whites. On average, blacks scored a standard deviation below whites in academic achievement. In the 40 years since the Coleman report this gap in achievement has narrowed. Trend data from the National Assessment of Educational Progress (NAEP) shows that the black/white reading gap among 17 year olds in 1971 was 1.2 standard deviations. This gap fell to 0.69 by 1996. There was a similar decline in the gaps in mathematics from 1.33 to 0.89 standard deviation units (Jencks and Phillips, 1998, p.3).

The declining achievement gaps, however modest, occurred during the 1970s and 1980s; during the 1990s the black/white gap actually increased and then dropped slightly at the close of the century. As of 2004, the gap for 17-year-olds in math and reading and 13 year olds in reading was larger than it was in 1990. Between 1990 and 2004 the gap for 9 year olds declined slightly. The black/white gap in NAEP reading scores for 13-year-olds in 1971 was 39; it declined to an 18-point difference in 1988 and then rose to a 22-point difference in 2004. The black/white gap in NAEP math scores for 13 year olds followed a similar pattern with a gap of 46 in 1971 that declined to a 27-point difference in 1990, rose to 32 in 1999, and then returned to a 27-point difference in 2004 (Perie, Moran, and Lutkus, 2005).

Noticeably, the cessation of the decline in achievement gaps coincided with the rollback of school desegregation: as school desegregation was largely halted in the late 1980s, the black/white achievement gap stopped declining. It seems likely the two are causally linked, although that has not been conclusively documented. Peer composition was the only school resource in EEO that did yield a significant impact — black students who had more white classmates tended to score higher, a finding that has been sustained in subsequent studies — but again, the impact was modest compared to the wide range of variation within schools. Grissmer, Flanagan, and Williamson (1998) concluded that the benefits of desegregation for the overall decline in the black-white achievement gap was limited to the south in the 1970s; otherwise, desegregation has not been a prominent source of changes in the achievement gap.

The Coleman report also found that higher achievement for both low and high SES students was associated with a higher average SES student body. The findings on composition were used extensively to promote policies that would increase both racial and socioeconomic integration of schools. This was part of the reason for Coleman's initial support for busing and his support for policies that increased the socioeconomic integration of schools. Coleman later dropped his support for busing, believing it led to "white flight," that is, the whites' departure from cities to escape busing plans (Coleman, Kelly and Moore, 1975). However, longer-term research has suggested that busing affected the pace but not the ultimate extent of changes in white urban school enrolments (Wilson, 1985).

*School Effects*

The most controversial finding of the Coleman report was that school resources had surprisingly little effect on educational outcomes once family background was controlled. Coleman et al. attempted to measure the effects of schools by examining an indicator of learning (performance on standardised tests) and the inputs that went into schools to produce learning. This model is called an education production function or input-output model. In this approach, schools are considered as “black boxes” and the activities that occur within the schools are unexamined. Users of this model consider that with adequate variation and accurate specification of inputs and outputs, a researcher can determine what mix of inputs will best improve academic achievement.

Economists have argued that production functions are useful, concise models of schools. The education production function models schools in the same way that economists model firms. Economists argue that they do not need to know how a particular economic process works within a firm works to model how the firm operates. To know how an economic process works in a particular firm, one need only know the goals of the firm (such as profit maximisation), the inputs and outputs of the firm, and to assume that production is the same in all firms. The advantage of this black box model for firms or schools is that it allows for aggregate analyses without requiring one to examine the details of what happens within a particular firm or school.

The Coleman production function model examined school effects by measuring the proportions of variance in student achievement attributable to school facilities, school curriculum, teacher qualities and attitudes, and student body characteristics. Of these five sets of school factors, student body characteristics contributed the most to the variance in verbal achievement. For example, among ninth graders, five per cent of the variance in verbal achievement could be accounted for by student body characteristics. The next most prominent factor was teacher qualities, accounting for one per cent of the variance. For ninth graders, all five sets of factors accounted for only eight per cent of the variance compared to 38 per cent of the variance accounted for in a model with the five school factors plus two family background factors and one individual attitude variable (Coleman et al., 1966, p.312). This pattern was largely consistent across grade levels and demographic subgroups.

Several replications and reanalyses followed shortly after the publication of EEO. Averch et al. (1974) reviewed the education production function literature to re-examine EEO's findings. These authors found no consistent findings for school resources. Some studies showed an effect for one set of resources while others showed effects for a completely different set of resources. Most of the studies examined showed that the effect of family background was much stronger than the effect of school resources. Averch et al. (1974) concluded that there did not seem to be much value to paying a premium for teacher experience, smaller class size, or teachers with advanced degrees.

Over the years, many critiques have appeared of the Coleman report specifically and of the production function literature more broadly. These critiques have

included arguments that Coleman's cross-sectional study could not adequately capture causal effects, that Coleman assumed a linear and additive relation between resources and learning, that cross-sectional measures of reading achievement could not distinguish between learning that occurs at home and learning that occurs at school, and that Coleman's estimation of school effects by measures of per cent of variance explained were sensitive to assumptions about causal ordering (Sorensen and Morgan, 2000; Hanushek, 1979; Hanushek and Kain, 1972; Bowles and Levin, 1968). Two years after the Coleman report, Harvard researchers re-examined the evidence and considered how well the Coleman report withstood various critiques. Mosteller and Moynihan (1972) noted that the most important finding of the Coleman report was that there was relatively little variation in the resources for black and white schools. This limits the extent to which school resources can possibly explain differences in achievement between black and white students. One could interpret this as saying that in a country with limited variation in school resources, family background is more closely associated with variance in student performance. This might be useful for trying to decide between different social policies in the U.S., such as funding schools versus a negative income tax, but it gives a very limited understanding of how school resources may affect achievement.

Jencks et al. (1972) argued that the main findings of the Coleman report were that resources varied little among U.S. schools, and that affluent peers boosted achievement. These authors examined the Coleman report and found that once the critiques of "sampling procedures, information-gathering techniques, and analytic methods" were taken into consideration, the results "[held] up surprisingly well" (Jencks et al., 1972, p.70). Smith (1972) re-examined the Coleman report, focusing on regression coefficients instead of per cent of explained variance, and came to similar conclusions about the lack of effect of school resources once family background was controlled. Hanushek and Kain (1972) examined the impact of different causal ordering of the variables in the study and found that the limited effect of school resources persisted.

Early studies of levels of school attainment have found similar results as studies of performance on standardised tests. In their study of the correlates of educational attainment, Jencks et al. (1972) found that school resources had little effect after controlling for family background. Jencks and his colleagues went so far as to argue that educational institutions and educational resources could not address inequalities as long as there were inequalities in parents' income, occupational status, and education.

By the 1990s, hundreds of studies of education production functions had been conducted. Greenwald et al. (1996a, 1996b) and Hanushek (1997); see also Hanushek 1989, 1994, and 1996) carried out reviews of this literature, with Greenwald et al. finding an effect of school resources on achievement and Hanushek not finding a persistent effect of school resources. The differences between these studies are based primarily on their different criteria for including studies in their meta-analyses, which resulted in different summaries of results. Greenwald et al. were much more selective, excluding or down-weighting studies when multiple findings derived from the same data. They also took into account the magnitude and variability of effects across studies, whereas Hanushek tallied positive, negative, and



neutral findings. As a result of their more selective scrutiny and synthetic approach, Greenwald et al. found moderate effects of school resources such as teacher's salaries and smaller class size.

Despite their differences, these reviews agreed on three points: 1) In at least some cases, higher levels of resources are associated with higher achievement; 2) qualities of schools that produce these effects are hard to pin down; and 3) how resources are used is more consequential for achievement than whether resources are present or absent. A potential concern with these conclusions is that they may reflect endogeneity: perhaps schools get more resources, or appear to use resources effectively, when students are high achieving, rather than vice versa. Randomised experiments could get around this concern, but very few have been conducted (Borman, 2002); an exception is the Tennessee class size experiment which showed that smaller classes raise test scores in the early elementary grades (Finn and Achilles, 1999). Fixed-effects models of schools or teachers are another approach to production functions that help address endogeneity (e.g., Rivkin, Hanushek and Kain, 2005). A school fixed-effects model, for example, includes a parameter for each school that captures all of its stable characteristics, whether observed or unobserved. Such models cannot indicate which school qualities matter, but they can assess whether some schools are more productive than others. These models demonstrate that achievement does vary systematically across schools, but that attempts to measure the school attributes that account for achievement variation generally fall short. Similarly, teacher fixed-effects models indicate that teacher effects are powerful, but only small portions of these effects have been attributed to specific teacher characteristics (Sanders, 1998; Rowan, Miller, and Correnti, 2002). Rivkin, Hanushek, and Kain (2005) estimated that an increase of one standard deviation in the overall teacher effect (or "teacher quality") is worth as much as a 10-student reduction in average class size. These findings bridge the earlier debate between Hanushek (1996) and Greenwald et al. (1996b), achieving a consensus that school and teacher resources indeed "make a difference," although the contribution of specific measured characteristics of schools and teachers is difficult to detect.

Barbara Heyns (1978) cleverly pointed out that school contributions to student learning could be assessed by comparing learning growth during the school year, when school was in session, to that during the summer, when school was not in session. Examining a sample of elementary students from Atlanta who were tested in fall and spring, she found that learning trajectories for students from advantaged and disadvantaged backgrounds diverged more during the summer than during the school year, suggesting that inequality tended to increase more when school was not in session. Entwisle, Alexander, and Olson (1997) found similar results for students from Baltimore, and Downey, von Hippel, and Broh (2004) recently confirmed the pattern with a national sample. Gamoran (1996) characterised this pattern as reflecting the compensatory effects of schooling: in the absence of schooling, inequality would be much greater than it already is. In this sense, also, schools matter a great deal, even though differences from one school to the next are small relative to the wide range of variation within schools. An important difference between the national findings of Downey et al. (2004) and the earlier studies in

Atlanta and Baltimore is that the latter indicated that summer learning accounts for all (Baltimore) or nearly all (Atlanta) of the growth in achievement inequality by social class that occurs over the course of 12 months, whereas Downey et al. found that about half the growth in inequality occurred during the summer, and the remainder occurs during the school year. Downey et al.'s findings were limited to kindergarten, first grade, and the summer between them; no U.S. national data set contains fall and spring test scores beyond first grade.

### *Schooling Effects*

Many writers have argued that looking at a school as a black box is misguided. As Bidwell and Kasarda (1980) explained, schools do not produce learning; rather they provide a context in which schooling takes place. Learning, according to this perspective, is a result of schooling, not schools per se. Along these lines, sociologists such as Barr and Dreeben (1983) demonstrated how schools channel resources toward students, instead of resources at the school level causing student learning. They noted that students are nested in classrooms which are nested in schools. Most of the variables examined in the school production function literature affect the school or classroom level and therefore only indirectly affect student learning. Economists have also argued that there is a need to look more specifically at the within-school processes that transform resources into learning. For example, Summers and Wolfe (1974) conducted an analysis of education production functions and found that the effect of resources such as class size and teacher quality have stronger effects for African American students and for students from poorer families. Similarly, the fixed-effects studies noted above found significant teacher effects, and determined that variation lies within schools.

Writers such as Bidwell and Kasarda (1980), Barr and Dreeben (1983), and Gamoran, Secada and Marrett (2000) and have argued that given the large amount of within-school variation, processes within schools are much more important for understanding student learning than are resource differences among schools. Within-school studies have focused on the effects of processes such as tracking (e.g., Heyns, 1974; Oakes, 2005; Gamoran and Mare, 1989), and the exposure to learning material (e.g., Gamoran et al., 1995; Applebee et al., 2003). Research on teacher effects reinforces the conclusion that within-school variation in achievement is partially attributable to schooling (Rivkin, Hanushek and Kain, 2005).

### *Limitations of U.S. Research on School Effects*

A distinctive limitation of U.S. based-research on school inputs and the organisation of school inputs is that in the U.S., only about 20 per cent of the variation in student achievement lies between schools and the remaining 80 per cent occurs within schools (Coleman et al., 1966). This limited between-school variation makes theoretically plausible school effects both small and difficult to detect. In developing countries, by contrast, between-school variation in achievement is larger. For example in Latin American countries, about 40 per cent to 60 per cent of the

variation in student achievement lies between schools (Casassus et al., 2001). Therefore in Latin America, school effects could be larger and easy to detect.

A second, related limitation of school effects research in the U.S. is the limited variation in the key independent variables of school resources. While there are notable differences at the extremes of the distribution of U.S. schools in the amount of money spent per pupil (Kozol, 1994), on average U.S. schools tend to have similar levels of resources (Mosteller and Moynihan, 1972). The poorest schools in the U.S. still have many more resources than the typical school in the developing world. Schools in many developing countries face shortages of basic teaching materials, such as any textbooks (Montagnes, 2001). The relatively high lower bound of school resources in the U.S. as compared with developing countries means that statements about school resources in the U.S. may not apply to other contexts. For example, one could use the U.S. school effect literature to talk about the effects of an additional thousand dollars per student for school expenditures between \$4,000 and \$12,000. For over half the countries in the world, \$4,000 dollars is between two and ten times their per capita incomes (IMF, 2000). Consequently, studies of school effects from developed countries probably say very little about the effects of school resources in developing countries. In addition, one could not use the results of U.S. studies to compare the effects of no school resources per student versus \$1,000 in school resources per student per year. Similarly, one could talk about the effects of old versus new textbooks in the U.S., but not the effects of textbooks versus no textbooks in a classroom. Attempts to extrapolate beyond the range of existing data are generally unwise because the relation between two variables may differ outside the range of observed data compared to their relation inside the observed range (Manski, 1995).

Research on school effects in the U.S. may only be appropriate to answer the question, "Are school resources associated with an increase in student achievement in relatively affluent schools that spend at least \$4,000 or more a year per student?" In contrast, international evidence about school effects might be better suited to addressing the simpler question, "Are school resources associated with increased achievement for both poor and rich schools?"

#### INTERNATIONAL RESEARCH ON SCHOOL EFFECTS

With his 1975 *Coleman Report from a Non-Industrialized Society*, Stephen Heyneman's study of education in Uganda heralded the examination of school effects internationally. Since then, many school effect studies in developing countries have shown a large effect of school resources even after controlling for family background (Heyneman and Loxley, 1983; Buchmann, 2002; Fuller, 1987; Fuller and Clarke, 1994; Casassus et al., 2001; Willms et al., 2001). The contrast between the U.S. and international comparative research suggests there may be little effect of school resources on achievement in rich countries, but stronger effects in poorer countries. These contrasting findings lend support to the idea that lack of school effects in developed countries is due in large part to a lack of variance in the independent variable of resources (Alexander, 2001).

Fuller (1987) examined 60 multivariate studies of the effects of school resources in developing countries and concluded that increasing resources in poor countries improve performance. Fuller and Clarke (1994) updated this review and concluded that even when family background is controlled, school factors such as school infrastructure, class size, teachers' experience and qualifications, and the availability of instructional materials increase student performance. The majority of school resource effects derive from basic resources such as textbooks and teacher education (Heyneman and Loxley, 1983; Fuller, 1987; Fuller and Clarke, 1994; Buchmann, 2002).

Baker and LeTendre (2000) argued that this effect could be due to a threshold effect of school resources. These authors called for more research into the comparative role of school effects. Baker et al. (2002) provided a partial answer to that call with an examination of the Third International Mathematics and Science Study (TIMSS) data. They attempted to replicate Heyneman and Loxley's findings by examining a current data set, the TIMSS 1995 survey of eighth graders in mathematics. The study analyzed explained variance for rich and poorer countries to determine whether SES or school characteristics explained more of the variance. The authors found no effects of school resources for richer or poorer countries after controlling for students' family backgrounds. They argued that part of the reason for not finding an effect of school resources in poorer countries was that due to economic growth, such countries had moved beyond the threshold at which schools are so underfunded that school resources matter.

Hanushek and Luque (2003) also studied the international effects of school resources by assessing effects on mathematics achievement using the TIMSS 1995 data. These authors took into account the order in which variables are entered into the regression analysis and defined an upper and lower bound for the effect of school resources. They argued that their results disproved the Heyneman and Loxley pattern and showed that school resources do not make any large significant difference after controlling for family background. They concluded that researchers should focus on the effects of school organisation instead of school resources.

The TIMSS survey asked administrators about school resources with the following question: "In your opinion, is your school's capacity to provide instruction affected by a shortage or inadequacy of any of the following?" The TIMSS questionnaire then listed nineteen different school resources from teacher qualifications, to textbooks, to computers with response categories of "none," "a little," "some," "a lot," and "not applicable." Unfortunately these questions rely on teachers' subjective judgments about levels of school resources. Perceptions of how the "availability of qualified mathematics teachers" or "inadequacy of instructional materials" can affect instruction may vary dramatically between countries and by different regions within countries. Administrators in different countries and in different schools can easily have different definitions of what constitutes a qualified teacher or inadequate instructional materials. This means that the TIMSS resource variables can tell us little about objective differences in levels of resources between different countries.

Another problem with using TIMSS to update Heyneman and Loxley's (1983) research is that the countries in the TIMSS sample may be too wealthy to adequately

test the continuation of the Heyneman and Loxley effect. The TIMSS sample has an average per capita income of \$14,988, compared to the 1995 global average of \$5,252. Tests of the effect of schooling in poorer countries by Baker et al. (2002) and Hanushek and Luquq (2003) used a sample of countries with an average per capita income that was 300 per cent of the global average.<sup>1</sup> In contrast, Heyneman and Loxley's sample of countries had an average per capita income only 50 per cent greater than the global average (\$1,613 as compared with \$1,043).

Table 2.1: Mean and Standard Deviation of Per Capita Income in 1990 dollars among six major international studies of school achievement.

Variable	Obs.	Median	Mean	S.D.	Min	Max
1974 PCI	152	592	1704	2386	30	12957
Heyneman&Lox.	26	1359	2793	2465	207	7069
1995 PCI	178	1582	5850	9380	66	45112
Timss95 pop1	23	18313	17462	10893	1187	41016
Timss95 pop2	36	15967	16558	12552	1187	43550
Timss95 pop3	19	20012	19350	12447	1603	43550
1997 PCI	178	1647	5945	9034	110	42096
PEIC	11	2842	3409	2191	744	8298
1999 PCI	178	1584	6037	9282	105	44206
PISA	41	15389	16373	12693	740	44206
Timss 1999	38	4123	10365	10726	300	34386

Note: Per capita income (PCI) data comes from International Monetary Fund (2000)

Table 2.1 provides information on the per capita income (in 1990 dollars) for countries included in 6 major international studies of achievement, which have been used to test and update Heyneman and Loxley's (1983) findings. Along with the sample-specific per capita income averages, we list the average for all countries in the IMF (2004) data base for that year. It is clear that the TIMSS 1995 and 1999 samples, along with the 1999 sample from PISA (Program for International Student Assessment), an OECD-sponsored international study, capture relatively advantaged populations, compared to the global averages. By contrast, the countries sampled by Heyneman and Loxley (1983) were much closer to the global average and much lower overall, as were the countries in a 1997 international study, the PEIC (*Primer Estudio Internacional Comparativo*), which focuses on Latin American countries (Casassus et al., 1998).

<sup>1</sup> The global per capita income data derive from the International Monetary Fund (IMF). The IMF does not provide statistics for Cuba, but given the economic crisis in Cuba and international sanctions, the per capita income is probably equal to or below the median income of other Latin American countries.

Adding the PEIC to the examination of differences across surveys is helpful because it is a recent study (like TIMSS and PISA), yet it focused on poorer countries (like Heyneman and Loxley). In Table 2.2, we compare three studies: Heyneman and Loxley (1983), Baker et al. (2002), and Long's (2006) analysis of the PEIC. The PEIC results are much closer to Heyneman and Loxley's results not only in per capita income, but also in achievement variance explained by school resources, lending credence to the notion that among poor countries, variation in school resources can matter substantially for student achievement.

*Table 2.2: Per Capita Income (in 1990 dollars) and Per cent of Total Variance Explained by School Resources*

*Panel A: Per Capita Income (in 1990 Dollars)*

<i>Data</i>	Mean	S.D.	Min	Max
<i>Heyneman and Loxley 1983<sup>a</sup></i>	2896	2476	207	7069
<i>Baker et al 2002<sup>b</sup></i>	17429	11531	1562	43550
<i>Long 2006<sup>c</sup></i>	3409	2191	744	8298

*Panel B: Per cent of Total Variance Explained by School Resources*

<i>Data</i>	Mean	S.D.	Min	Max
<i>Heyneman and Loxley 1983<sup>a</sup></i>	50.52	18.71	22	88
<i>Baker et al 2002<sup>b</sup></i>	34.44	17.12	6	79
<i>Long 2006<sup>c</sup></i>	56.73	17.17	22	75

Notes:

a. Heyneman and Loxley (1983) examined the following countries: Uganda, Bolivia, Egypt, Iran, El Salvador, Thailand, Peru, Paraguay, Colombia, Brazil, Botswana, Chile, Mexico, Hungary, Argentina, New Zealand, Australia, Italy, United Kingdom, Belgium (Flemish), Belgium (French), Netherlands, Finland, Germany, Sweden, United States, and Japan.

b. Baker et al. (2002) examined the following countries: Russia, Romania, Thailand, Colombia, Latvia, Lithuania, Slovak Republic, Hungary, Czech Republic, Korea, Slovenia, Greece, Portugal, Cyprus, New Zealand, Spain, Israel, Australia, Canada, Hong Kong, France, United Kingdom, Belgium (Flemish), Belgium (French), Singapore, Netherlands, Ireland, Austria, Germany, Iceland, Denmark, United States, Norway, and Switzerland.

c. Long (2006) examined the following countries: Honduras, Bolivia, Dominican Republic, Paraguay, Colombia, Brazil, Venezuela, Chile, Mexico, and Argentina (Cuba was excluded from this analysis due to a lack of comparable IMF data on per capita income).

Close inspection of these three studies suggests that it is the income levels of the countries selected, not the time the studies were conducted, that account for the contrasting findings. Figure 2.2 displays the results of all three studies. First, Heyneman and Loxley examined 1971-1974 data from 26 countries and compared the per cent of explained variance in achievement accounted for by school resources to the per capita income of each country. (The 26 countries are represented by circles in Figure 2.2). They found that school effects were larger in poorer countries. The mean per capita income for the counties they studied was \$2,896 and a mean of

51 per cent of explained variance was attributable to school resources (see Table 2.2). Second, Baker et al. (2002) replicated Heyneman and Loxley's analysis with a richer set of countries using data from the 1995 TIMMS survey. These countries had an average per capita income of \$17,429, and an average of 34 per cent of explained variance accounted for by school resources (see Table 2.2). On their own, points in the scatter plot from TIMSS (see the squares in Figure 2.2) show no clear trend in the relation between per capita income and per cent of variance accounted for by school resources. Third, Long (2006) examined 1997 data from Latin American countries with a per capita income similar to Heyneman and Loxley's: \$3,409 for Long (2006) and \$2,896 for Heyneman and Loxley (1983) (see Table 2.2). Long regressed parents' education, books in the home, region, school sector and the school resource variables of teacher's experience, number of library books, class size, school size, availability of textbooks, chalkboards, and other resources on student achievement. In eleven of these Latin American countries, an average of 57 per cent of the explained variance was accounted for by school resources. Long's findings confirm those of Heyneman and Loxley, and suggest there is a clear threshold beyond which variation in school resources matters little.<sup>2</sup>

We tested a threshold model of school resources by combining the data points from the three studies whose results are displayed in Figure 2.2.<sup>3</sup> We found that a model with a threshold of \$16,000 per capita income had an  $R^2$  of 31 per cent compared to an  $R^2$  of 9 per cent for a simple linear regression of per capita income on per cent of variation accounted for by resources. This provided clear statistical evidence of a better fit for the threshold model.<sup>4</sup> The two regression lines (above and below the threshold) are displayed in Figure 2.2. For countries with per capita incomes below \$16,000, higher levels of per capita income are associated with sharply lower proportions of achievement attributable to school resources. For countries above this threshold, higher levels of per capita income are associated with very slightly (though statistically significant) lower levels of variance explained. It is particularly interesting to note that in combination with data points from Heyneman and Loxley (1983) and Long (2006), the results from Baker et al. (2002) also point to a threshold effect (see Figure 2.2).

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2 Heyneman and Loxley (1983) and Baker et al. (2003) used different approaches to compute percentages of variance explained by school resources; the former computed it as the ratio of variance explained by school resources over variance explained by family background and school resources combined, while the latter computed the difference between variance explained by family background and school resources combined, and variance explained by family background alone. The PEIC data points in Figure 2 were computed using the former approach, but the the threshold model holds equally well under either approach (see Long 2006).

3 We estimated the following model:  $\hat{Y} = B_0 + B_1 * (\text{countries with a PCI below the threshold}) + B_2 * (\text{countries with a PCI above the threshold})$ . Next, we examined thresholds in \$1000 increments between \$5000 and \$20,000. We used the R-squared of each model to choose a best fit model, and this criterion yielded a threshold of \$16,000.

4 The simple OLS model was:  $\hat{Y} = B_0 + B_1 * (\text{PCI})$

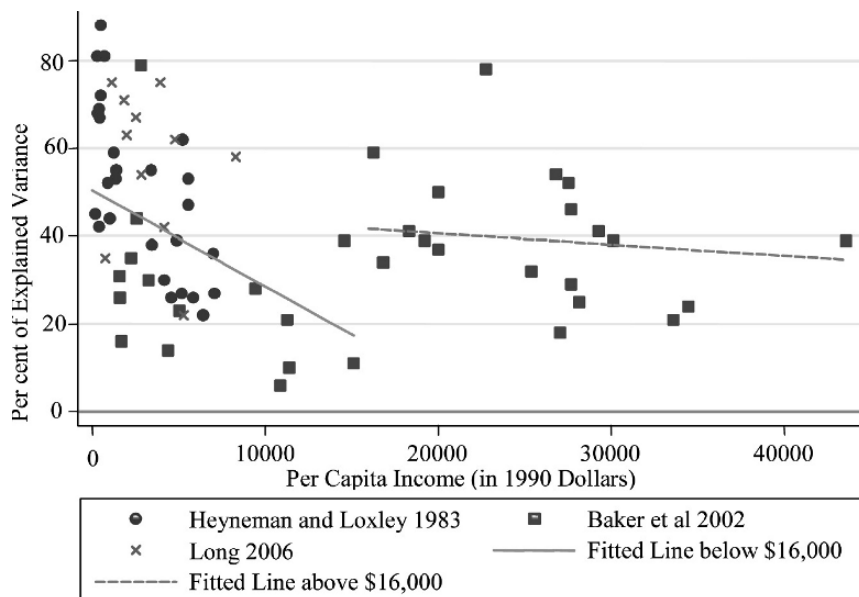


Figure 2.2: The Relation between Per cent of Variance Explained by Resources vs. Per Capita Income (in 1990 Dollars)

Note: Sources: Heyneman and Loxley, 1983; Baker et al., 2002; Long, 2006.

In sum, international evidence shows that school resources do have a strong effect on student achievement for the poorest countries. This result suggests that the Coleman report finding of a limited association between school resources and achievement once family background is controlled holds only for countries that have passed a threshold of basic school resources and experience a diminishing (though non-zero) marginal return to additional school resources.

## SCHOOL EFFECTS AND POLICY DEBATES

### *Sector, Choice, and Vouchers*

In the early 1980s, Coleman revisited the issue of school effects with new research on Catholic and other private high schools. Using a 1980 national survey called *High School and Beyond*, Coleman, Hoffer, and Kilgore (1982) and Coleman and Hoffer (1987) reported that Catholic and other private high schools produced higher achievement than public high schools. Moreover, achievement was more equitably distributed by social class in Catholic than in public schools. Interestingly, the political characterisation of Coleman's findings shifted from his earlier work. In the 1960s and 1970s, liberal policies were threatened by the (incorrect) perception that



“schools don’t matter, families do.” Meanwhile, conservative policies were bolstered by the emphasis on families as the source of inequality. By the 1980s, when Coleman did find school effects, his results were embraced by conservatives who favoured vouchers for private schools, while liberals questioned the purported private-school advantage.

While there is a contradiction in the popular responses to the 1966 and 1982 Coleman studies, there is no contradiction in the research results, despite the limited school effects found in the Coleman Report and the positive school effects found in the later high school studies. Coleman et al. (1966) found a limited effect of school resources based on a study of public schools. In his 1982 and 1987 studies Coleman expanded his sample to include public and private schools and found a positive effect of private schools on student performance.

### *Debates about School Choice and Vouchers*

Another legacy of the Coleman report is a regular reference to social science research in public debates about school reforms. We can see this legacy clearly in the research on school vouchers and school choice. Much of the debate about the role of school resources within schools has focused on the efficiency gains from increased school choice, charter schools, school restructuring, private versus public schools, and the effects of privatisation. Several writers have argued that increased school choice or privatisation increases both quality and efficiency in education (e.g., Chubb and Moe, 1990, Friedman, 1955). Howell and Peterson (2002) cited evidence from New York and Cincinnati to argue that vouchers can also improve equity by increasing academic achievement for African Americans and can diminish educational inequalities between racial and ethnic groups. Others have argued that school vouchers increase educational inequalities (Witte, 1998, Krueger and Zhu, 2004a) and do not improve student performance (Carnoy, 2001, Carnoy and McEwan, 1999).

Chubb and Moe (1990) reported evidence of positive effects of private schools on achievement due to increased school autonomy. Peterson et al. (1999) found positive effects of vouchers on achievement based on the evidence from the first two years of an experimental allocation of vouchers in Cleveland. In a second experimental study of vouchers in Dayton Ohio, Washington DC, and New York City, Howell and Peterson (2002) found no effect of vouchers for white and Hispanic students but a positive effect of vouchers for African American students in certain grades and locations.

Other researchers have examined the same evidence from private schools and vouchers programs and found that they increase stratification with little or no gain in achievement. Lee and Bryk criticised Chubb and Moe’s methodology and re-examined their data to find no evidence for Chubb and Moe’s pro voucher argument (Bryk and Lee, 1993, Lee and Bryk, 1993). Researchers at the University of Indiana School of Education conducted a four-year longitudinal study of the Cleveland voucher experiment and found no consistent effect of vouchers (Metcalfe et al., 2003). Krueger re-examined the data from the New York City voucher experiment

and likewise found no effect of school vouchers (Krueger and Zhu, 2004a, 2004b). Evidence from Milwaukee also shows a stratifying effect of vouchers (Witte, 2000). While the Milwaukee voucher program was targeted to low-income families, Witte's (2000) research found that the more educated among the poor were the most likely to take advantage of the program. The result of the voucher program was an increase in stratification with a limited increase in achievement.

Nationwide voucher programs have been implemented in Chile, Colombia, Scotland, Sweden, and New Zealand.<sup>5</sup> Evidence from Sweden and Chile seemed to show some stratifying effect of vouchers (Carnoy, 1998), as did school choice in Scotland (Willms and Echols, 1992). An examination of New Zealand's voucher program found numerous problems with the system of school competition, especially with questions about how to deal with failing or "bankrupt" schools (Fiske and Ladd, 2000). McEwan (2000) reviewed the literature on large-scale voucher programs and found mixed and inconclusive evidence as to whether the programs increased stratification and sorting or improved efficiency and achievement.

In a study of Latin American schools, Somers et al. (2004) found that the positive effect of private schools on achievement disappeared when the mean level SES of the school was controlled. Somers et al. (2004) argued that any benefits of private education are due to peer effects and that a policy of subsidising private education will only lead to limited benefits due to the small number of high-SES peers.

The Coleman report has played a strong role in shifting the focus of debates about school inequalities from inadequate resources to the ways in which resources are used. Debates about the structure of schools and the impact of private versus public schools have been influenced by the findings about composition effects and the importance of family background first described in EEO.

#### CHANGING CONCEPTIONS OF EQUALITY OF EDUCATIONAL OPPORTUNITY

*Equality of Educational Opportunity* was a landmark not only in its empirical findings, but also in its conception of what equal opportunity meant. Prior to the Coleman report, equal opportunity was conceived as similar levels of inputs to schooling (Coleman, 1968). EEO recognised this view and attended to it by examining school differences in expenditures, laboratories, libraries, and so on, as well as racial composition which, following the Supreme Court's declaration that "separate educational facilities are inherently unequal" (Brown vs. Board of Education, 1954, p.495), was also viewed as a school input. At the same time, Coleman and his colleagues redefined equality of opportunity by focusing on results.

A fourth type of inequality may be defined in terms of consequences of the school for individuals with equal backgrounds and abilities. In this definition,

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<sup>5</sup> Colombia's program was targeted to poor families, while the other three were nation wide programs.

equality of educational opportunity is equality of results, given the same individual input (Coleman, 1968, p.14).

This was the main definition of equal opportunity addressed in EEO, and it has also served as the primary focus for decades of research on school and schooling effects that have followed EEO. These studies ask, "Controlling for family background, what school and schooling conditions influence achievement?" By controlling for individual inputs, these studies assess equality of results among students with similar backgrounds.

Although EEO's definition lies behind most subsequent research, two challenges to the prevailing view have emerged. One was articulated by Olneck (1993), who argued that equal inputs and equal results are similar in that both emphasise distributions of valued goods. With rising interest in diversity and multiculturalism, Olneck argued, two other concepts may serve as the basis for judgments about equal opportunity: representation and participation. Multicultural education demands that the expressions and experiences of disadvantaged groups be represented in the curriculum and recognised as valued knowledge. Only when the ideas of all groups are represented can equal opportunity be said to hold. Similarly, equal opportunity also rests on the chances for minority groups to participate in the process of defining the experiences of schooling and the criteria by which school success is judged. In the absence of equal representation and participation, unequal outcomes are likely to persist since the terms of success are dictated by dominant groups and located in criteria that best preserve their place in the social hierarchy. Support for this view may be found in Jencks and Phillips' (1998) analysis of test bias as a basis for the black-white test-score gap. Although test items are not prejudicial per se, in the sense of being inaccessible to blacks on the basis of their experience, the privileged position of standardised tests as a criterion of success despite their questionable substantive validity works to the persistent disadvantage of blacks. Greater opportunity for blacks to participate in determining the criteria of success might lead to more widespread use of other signals in which blacks would fare better.

A second challenge to the prevailing definition of equal opportunity was presaged by Coleman et al. (1966), though it was not their main focus.

A fifth type of inequality may be defined in terms of consequences of the school for individuals of unequal backgrounds and abilities. In this definition, equality of educational opportunity is equality of results given different individual inputs. The most striking example of inequality here would be children from households in which a language other than English, such as Spanish or Navaho, is spoken. Other examples would be low-achieving children from homes in which there is a poverty of verbal expression or an absence of experiences which lead to conceptual facility (Coleman, 1968, p.17).

In this conception, equal opportunity means equal results even among students from different social backgrounds. Thus, equality would be indicated by a regression model in which results are equal across groups *without* controlling for background conditions. This view places an extraordinary burden on schools: educators are charged with obtaining equal results among students who come to school with varying individual resources and experiences. Yet this is exactly the stance taken by

current federal legislation in the U.S. The hallmark of the *No Child Left Behind Act* (NCLB; 2002), signed by President George W. Bush on January 8, 2002, is that all students will be judged “proficient” on standardised tests as of the school year 2013-14. In the space of a dozen years, schools around the country are expected to eliminate vast gaps in proficiency among subgroups. NCLB is distinctive in that schools are required to report not just overall averages, but the achievement average for each population subgroup that is of sufficient size for reliable estimation. Tests are designed and proficiency standards are set by states, not by the federal government, and cross-state variation in what counts as proficient is already evident (Olson, 2005), but in all cases the requirement to eliminate subgroup differences is a substantial challenge. In the decentralised system of U.S. education, the federal government cannot actually impose standards on schools, but it has tied federal funding to adherence to the law, and while several states have raised objections and even filed suit against the federal government, no state has turned down the federal funding and thus all are accountable for equal results.

Despite its obvious appeal, this conception of equal opportunity faces constraints that may limit its survival. First, in a time of strained budgets and competing demands, it seems unlikely that substantial compensatory resources will become available that will lead to equal results across subgroups that come from unequal backgrounds. Second, even if such resources were available, it is not clear that existing knowledge of educational effects would suffice to direct those resources to effective programs that would eliminate achievement gaps by 2013-2014. As we have seen, researchers have had more success in assessing the size of school and teacher effects than in identifying specific school and teacher conditions that promote higher achievement.

NCLB has its own theories about how gaps can be reduced. The law requires “*highly qualified*” teachers in every classroom, specified as teachers with college degrees, teacher certification, and subject matter competence. While the latter has been empirically associated with higher test scores (Goldhaber and Brewer, 2000), the association, like other effects, is modest. NCLB insists that students in failing schools be offered the chance to choose another school (public or private), and to receive free tutoring. Evidence on the achievement benefits of school choice is mixed (e.g., Howell and Peterson, 2002; Krueger and Zhu, 2004a); evidence on tutoring is limited but promising (e.g., Borman et al., 2005). The law also urges teachers to engage in practices supported by “scientific evidence”; while this principle seems promising in the long run, at present few programs and policies have rigorous evidence of causal effects (Comprehensive School Reform Quality Center, 2005).

In light of these challenges, accountability efforts under NCLB may shift more towards a “value-added” approach instead of the current approach that relies on reaching predetermined achievement targets to determine school success or failure. Value-added assessments emphasise growth in student achievement, taking into account where students begin and how much they gain over a period of time. Recently, the U.S. department of education announced it would allow 10 states to implement achievement growth measures in their accountability systems, on a pilot basis (Olson and Hoff, 2005). On the one hand, a value-added approach seems both

more fair and more realistic, in that it recognises that an effective school is one that serves its students well, rather than one that hits a predetermined target. On the other hand, the value-added approach reverts to EEO's conception of equal opportunity, in the sense that equality means equality of results taking account of initial differences among students. Without some attention to absolute standards, the goal of equal results for different subgroups is unlikely to be approached.

## CONCLUSIONS

### *Equality of Educational Opportunity Today*

Forty years on, the findings of the Coleman report hold up remarkably well, in some ways distressingly so. In the U.S., school segregation outside the south has returned to nearly its level in the late 1960s on some indicators: most blacks study in schools with 50 per cent or greater minority enrolment. This fact in part reflects the changing U.S. population, which has a much greater proportion of minority students overall, but it also reflects the rollback of school desegregation policies (Orfield, 2001). Most whites, by contrast, are enrolled in schools that are predominantly white. The black/white achievement gap, which declined notably until about 1990, has been stable since then. Student achievement still varies substantially within schools (in the U.S. and other developed countries), and this variation is still tied to students' social and economic backgrounds.

In light of these persisting patterns, the lessons of EEO and the research that followed in its wake leave little room for optimism about the power of schools and schooling to bring about equality of opportunity in the sense of equality of results, let alone equal participation. What would it take for contemporary policies to bring about equal opportunity? This could occur in one of two ways. First, policies could be enacted across the board, that have greater benefits for disadvantaged students than for their more advantaged peers. Second, policies that have similar effects on all students could be focused mainly on disadvantaged students. The school choice provision of NCLB may fit the first category, in that private schools have in some studies been shown to benefit minority students more than other students (Coleman, Hoffer, and Kilgore, 1982; Bryk, Lee, and Holland, 1993; Howell and Peterson, 2002). NCLB policies on teacher qualifications, evidence-based practice, and tutoring may fit the second category. These provisions may do little on their own to close gaps; however if they are primarily directed towards schools that enrol high proportions of disadvantaged students, they may make a difference.

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# 3 Social Inequalities and Education Policy in England

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## INTRODUCTION

Education is a key determinant of life chances in industrialised societies (Shavit and Blossfeld, 1993), and educational credentials are an important intervening link between social origins and occupational destinations (Halsey et al., 1980). But the importance of education is not limited to its impact on labour market outcomes. Education has been linked to a broad range of indicators of quality of life, from health to civic participation (Schuller et al., 2004).

This paper deals with educational differences in terms of social class, gender and ethnicity. These are key socially structured ascribed identities affecting children's educational experiences and outcomes. The paper examines the impact of these categories together and explores significant interactions between them. We discuss the economic, social and cultural factors underlying these inequalities, and the impact of current government policies.

The paper examines the roles of the home, the school and the wider society in determining socially structured differences in educational outcomes. We address the questions of what impact government policy can realistically be expected to have on educational inequalities, and what types of policies may be most productive. Comparative evidence suggests that social class influences on education and cognitive development are particularly strong in Britain when compared with most other European countries (Esping-Anderson 2005). Thus, while increasing attention has rightly been given to gender and 'race'/ethnicity by educational researchers and policymakers, the continuing impact of social class on educational outcomes should not be ignored. We shall argue that there is a need for greater honesty in the presentation of policy-relevant research findings, in particular to acknowledge the limits of what one can infer from data which does not contain adequate measures of children's socio-economic backgrounds.

## SOCIOLOGICAL PERSPECTIVES ON EDUCATIONAL DIFFERENCES BETWEEN GROUPS

### *Social Class*

The existence of large social class differentials in educational attainment is well established for all industrialised societies. Although there is evidence that

educational reforms have reduced differences in rates of educational participation between the social classes (Hellevik, 1997; Jonsson and Mills, 1993b; Jonsson and Mills, 1993a), the association between social class and educational outcomes remains intact. In addition, the labour market is not ‘class blind’, as occupational attainment can be shown to be associated with social class of origin, once educational attainment and test scores are controlled (Marshall and Swift, 1996; Breen and Goldthorpe, 1999).

Social class inequalities in tested ability emerge at a young age and increase steadily over time (Fogelman, 1983; Fogelman and Goldstein, 1976; Feinstein, 2003; Douglas, 1964). Later educational transitions (such as the transition to higher education) in Britain appear to be largely determined by prior academic attainment (Galindo-Rueda et al., 2004), which suggests that social class inequalities need to be tackled early on.

Social class is operationalised in terms of occupational categories, but high social class status is associated with social and cultural privilege, as well as economic privilege. Sociologists often explain social class differences in educational attainment in terms of three forms of capital: economic capital, social capital and cultural capital.

Despite the introduction of universal free and compulsory schooling, financial resources still give an advantage in pursuing educational attainment. Well-off parents can afford better schools for their children, by buying either private schooling or housing in a good catchment area. In addition, many pupils receive private tuition (Ireson and Rushforth, 2004). Educational resources such as a computer, a room of one’s own for study, etc. are costly. Financial resources can also have indirect impacts on the quality of children’s environments, for example, poverty leads to stress which may affect parenting (Whitty, 2002; Duncan and Brooks-Gunn, 1997; Mortimore and Whitty, 2000). In addition, the costs and benefits associated with pursuing particular educational options may vary according to the individual’s social class of origin (Boudon, 1974; Breen and Goldthorpe, 1997).

Parents’ social class and educational qualifications are closely linked, as qualifications are linked to labour market outcomes. Parents’ education, and the skills, knowledge, dispositions and practices that go with it, are often described as ‘cultural capital’. Bourdieu (1977) states that cultural capital consists of familiarity with the dominant culture in a society, and especially the ability to understand and use “educated” language. The concept of cultural capital has been interpreted in various ways, but there is a consensus that cultural practices associated with the educated middle-classes, such as reading, are linked to educational attainment (Crook, 1997; Sullivan, 2001; De Graaf et al., 2000).

Social capital inheres in the relationships between people in families, schools and communities. It describes ‘features of social organisation, such as trust, norms and networks’ (Putnam, 1993) and, with regard to education, it refers to “the set of resources that inhere in family relations and in community social organisation and that are useful for the cognitive or social development of a child or young person” (Coleman, 1994: 300).

For Coleman (1988), social capital in the family consists of the physical presence and attention given to the child by family members. Social capital within the school consists of social networks which allow social norms to be established and enforced. Social capital affects parents' relationship with the school, and students' relationships with one another and with their teachers. It is clear that peer group norms impose strong pressures on school students. Power et al. (1998) found that, whereas academically able pupils at a grammar school were likely to worry about not being able to keep up with the work, academically able pupils at a comprehensive were much more likely to worry about other pupils thinking they were too clever. There have also been concerns that boys sanction each other particularly severely for pursuing academic success (Epstein, 1998; Power et al., 1998). Sewell (1997) suggests that exaggerated masculine peer group norms are particularly damaging for African-Caribbean boys. These examples illustrate the complex interactions between class, gender and ethnicity and social capital, and the fact that social capital can have positive or negative consequences for educational attainment. Commitment to education can be strong in certain less affluent groups, and thereby help to counteract material disadvantage to some extent. On the other hand, many working class and minority ethnic students attend schools where links between parents and teachers are weak, or where social norms in the peer group make studying more difficult. Furthermore, differences in social capital have implications for social inclusion as well as educational attainment, as strong 'bonding' capital within one social group may militate against the development of 'bridging' capital across social groups (Putnam, 1995).

### *Gender*

The gender gap in the General Certificate of Secondary Education (GCSE) examinations, which are taken by all students in the final year of compulsory schooling at age 16, has been widely commented on, and it is often assumed that the gap must reflect unfairness to boys. There was a jump in the gender gap in the late 1980s, and, understandably, commentators have assumed that the coursework element of GCSE assessment can explain the increased gender gap. However, the evidence suggests that this is not a valid explanation. The dramatic reduction in the coursework element of GCSE assessment in 1994 did not lead to *any* reduction in the gender gap in attainment.

Another popular explanation for the gender gap is that school environments have become 'feminised', partly due to the high proportion of women in teaching (especially in primary school teaching), and that this is unfair to boys, who suffer from a lack of male role models and from 'feminine' teaching styles. There is a striking lack of any empirical evidence to support the view that boys suffer from being taught by women.

The 'culture of laddishness' explanation suggests that there is a particular problem with working class boys, e.g. "the fact that the biggest current gap in performance is between working-class boys and girls makes the problem more acute for a Labour government intent on creating an inclusive society" (Leader, 2000). In

fact, there is only a small gender gap at lower levels of attainment, and the gender gap is larger among the middle classes than the working classes (Gorard et al., 2001; Sullivan et al., 2004). Working-class girls typically do more domestic work (including childcare and elder care), which can interfere with schoolwork and homework.

It is also worth noting that girls have always outperformed boys in the early years of education, but in the past girls' early advantage was not carried through strongly to GCE level — probably because the view that women's paid work outside the home was not as important as that of men was still prevalent. Since the 1970s, women's labour market participation has increased enormously, family structures have changed, and attitudes to girls' education have changed correspondingly. The trend towards smaller families may also have been particularly beneficial for girls, as parents with limited resources tend to favour sons and often allocate domestic duties to girls. Given these socioeconomic changes, it would be surprising if girls' academic attainment had not increased by more than that of boys.

Every year, the publication of the GCSE results is greeted with expressions of deep concern about the fact that the boys are not doing as well as the girls. This discourse of male disadvantage has justly been described as a 'moral panic' (Weiner et al., 1997). The modest gender gap in school qualifications needs to be put in the context of broader socioeconomic inequalities. Males are hardly a disadvantaged social group.

Women's labour market disadvantage persists despite girls' much vaunted triumph over boys at GCSE. Women's under-representation in 'masculine' subject areas such as maths, science, engineering and technology contributes to this problem, although women do not achieve the same occupational status as their male peers even when they have the same qualifications. However, the gap between male and female graduates is far smaller than the gender gap for poorly qualified young school-leavers, as the labour market is far more 'gendered' at the lower-skilled end of the occupational distribution (Power et al., 2003). Young women leaving school with no qualifications are particularly disadvantaged compared to their male peers, as unqualified girls have fewer labour market opportunities open to them than unqualified boys do, and vocational training remains strongly segregated by gender (Bynner et al., 1997; Rake, 2000; Hakim, 1996; Power et al., 2003). For young women, NEET (not being in education, employment or training) is associated with lone parenthood and depression (Bynner and Parsons, 2002). The fact that unqualified women are more disadvantaged than unqualified men may give girls a greater incentive to achieve at school.

### *'Race' and Ethnicity*

There was a consensus in the research literature until the 1980s that minority students 'underachieved' in education (Tomlinson, 1991). This consensus was partly due to the fact that first generation immigrant children, especially those who did not speak English, suffered particular disadvantages. However, methodological crudity

in early studies also led to an exaggeration and over-simplification of 'ethnic disadvantage'.

The Swann report (1981), an inquiry into the 'causes of underachievement' of African-Caribbean children, found that these pupils achieved fewer exam passes than white or Asian children. The report was widely criticised for failing to present adequate statistical evidence to assess minority ethnic attainment (Plewis, 1988). 'Asian' pupils were lumped together as an undifferentiated group, and social class and gender differences did not form part of the analyses. More recent research on ethnicity and education has been more sophisticated, yet the picture we have regarding the educational attainment of young people from different ethnic groups is still patchy.

Some studies are limited geographically, while some do not distinguish adequately between ethnic groups with very different national, cultural and socio-economic origins. There is a trade off between using nationally representative data and using data with sufficient representation of ethnic minorities. It is obviously crucial to control for social class in order to isolate specifically ethnic differences, since different ethnic groups have different social class profiles (Drew and Demack, 1998). Family size and family structure have also been neglected, despite the fact that these have long been established as significant predictors of educational outcomes, and ethnic variation in family structure and size has been documented (Modood et al., 1997). Nevertheless, studies that control for social class (Drew and Gray, 1990; Drew, 1995; Haque and Bell, 2001) suggest that ethnic differences in GCSE results are largely explained by this variable, though some minority ethnic students, notably Indians, perform significantly better than whites even when social class is controlled. The evidence regarding participation rates in post-compulsory education suggests that ethnic minorities persist in further and higher education to a greater extent than whites. Drew (1995) finds that Asians are the most likely to stay on in further education, followed by African-Caribbeans, with whites being the least likely to stay on, despite their relatively privileged social class profile.

Gillborn and Mirza's (2000) analysis of the educational attainment of minority ethnic groups concluded that, while social class was clearly the most important determinant of educational success, there were aspects of differential performance that could not readily be accounted for purely in these terms. Part of the difficulty in establishing both trends and causation lies with the small cell size of the samples used when results were broken down by minority ethnic group. For example, research using data from the Youth Cohort Study has expressed the concern that the increased attainments of African-Caribbean, Pakistani and Bangladeshi young people were less certain than those of whites and Indian pupils from 1988 to 1997 (Gillborn and Mirza, 2000; Demack et al., 2000). However, the larger year-on-year fluctuations for these minority ethnic categories are likely to be due to small cell sizes.

Even if significant differences between ethnic groups could be robustly established, more fine-grained research would be needed to explore how far these reflect more subtle social intra-class distinctions, economically, socially or culturally, and how far they derive from the effects of racism within communities



and schools. In order to inform policy on these matters, we need much better theory as well as data on the relative influence of school, family and community on ethnic differentials in educational attainment. Clearly, outcomes are the result of complex interaction between these different factors. Ethnographic research has focussed strongly on racism within schools. Considerable attention has been given to the way in which schools can discriminate against minority ethnic groups, either through direct racism, or through processes which are indirectly discriminatory. For example, Gillborn and Youdell (2000) and Troyna (1992) describe the way in which school practices such as setting by ability and tiered entry to GCSE can discriminate against minority ethnic groups. Racism and discrimination within schools are clearly extremely important in their own right, yet it is very difficult to say how much impact these factors may have in determining educational outcomes for minority ethnic groups.

Differences in the level of social capital between ethnic groups have been more extensively explored in the US and elsewhere than in Britain. Explanations of unequal educational attainments that refer to the cultural and social characteristics of minority groups have often been viewed with understandable suspicion, as such arguments are seen as 'blaming the victim' (Vermeulen, 2000). Yet economic, social and cultural differences can affect the relationship of children and their families to schooling, sometimes in unexpected ways. Economic disadvantages may be counter-balanced by high levels of social capital within the home and community (Lauglo, 2000), so it is possible for economically disadvantaged minority ethnic communities to promote educational success (Portes and Rumbaut, 2001; Gibson, 2000).

Controlling for educational qualifications, ethnic minorities do not achieve labour market positions and incomes on a par with whites, and face an increased risk of unemployment (Heath and McMahon, 1997; Connor et al., 1996; Heath and Smith, 2003). A likely explanation for the fact that members of minority ethnic groups tend to stay on in further and higher education for longer than similarly qualified whites is that the former anticipate labour market discrimination, and realise that they will need to outperform the white majority in terms of qualifications in order to compete for jobs. A lack of immediate job opportunities may also remove the incentive for minority ethnic youth to quit education (Rivkin, 1995; Leslie and Drinkwater, 1999).

### *Schooling*

It is well established that 'home background' is a much stronger predictor of educational outcomes for children than school attended, but this does not mean that schooling does not matter. On the other hand, the potential role of individual schools in challenging social disadvantage has sometimes been exaggerated by policy makers (Mortimore and Whitty, 2000).

Researchers in the field of school effectiveness have argued that there are important differences in performance between schools, controlling for student inputs (Rutter et al., 1979; Mortimore et al., 1988; Smith and Tomlinson, 1989; Tizard et al., 1988; Sammons et al., 1995b). However, there are serious methodological

difficulties inherent in carrying out school effectiveness research, and these are often underplayed (Goldstein and Woodhouse, 2000). Attempting to control adequately for parental choice of school is a crucial difficulty that faces all such studies (Heath and Clifford, 1981). This challenge remains even when a range of social background measures have been controlled. Coe and FitzGibbon, (1998) highlight the way in which many school effectiveness studies interpret the unexplained variation between schools, after adjusting for intake, as representing 'school effectiveness'. This practice is doubly misleading when the controls for intake are weak. For example, recent Department for Education and Skills research (DfES, 2004) was widely quoted in the media stating that a high performing secondary school can make a difference of the equivalent of a year and a half's extra progress over each pupil's school career, regardless of young people's backgrounds. The analysis controlled for prior attainment, gender, Free School Meals (FSM) eligibility — a measure of poverty based on eligibility for Income Support benefits — and EAL (English as an additional language). These controls accounted for 92 per cent of the variance in later attainment. The 8 per cent unexplained variance was described in media reports (for example Ward, 2004) as being due to the 'effectiveness of teaching' although no measure of the effectiveness of teaching was actually included in the analysis. The original DfES report is actually clear on this point, stating that '*some of the unexplained variance may represent differences in school effectiveness*' (p.4), but this was not the message from media reports.

Researchers have identified factors that are associated with effective schooling, such as high aspirations and an academic ethos (Schveers and Creemers, 1989; Sammons et al., 1995a). But noting the importance of these characteristics is easier than creating them. Given the importance of social capital, it is likely to be easier to promote characteristics such as high aspirations in some schools and communities than in others (Lupton, 2004).

Clearly, certain school characteristics matter more for some students than for others. For example, there is a consensus in the literature on class sizes that substantial cuts in class size can make a difference for the youngest children, especially for those from disadvantaged backgrounds, and those with low levels of prior attainment (Yang et al., 2000; Blatchford et al., 2002; Prais, 1996). These differential effects are salient in policy terms, as a small cut in class sizes across the board may have no impact, whereas a targeted cut in class sizes could achieve significant effects. In view of recent evidence on the lack of impact of class size on the attainment of older children (Blatchford et al., 2004), the 1997 pledge to lower all infant classes to 30 or fewer pupils was appropriate in terms of age-range but may have been misguided as a way of tackling disadvantage. It benefited suburban rather than inner-city constituencies as, due to falling rolls, inner city schools already had few classes of over 30 children.

There is a consensus that 'teacher effects' matter more than 'school effects', so that, for any given subject, it matters more which class one is in than which school (Scheerens and Bosker, 1997; Teddlie and Reynolds, 2000). Yet only a minority of studies focus on the level of the classroom and the teacher rather than the school as a whole. There is a lack of British research on teacher characteristics, but evidence

from the US suggests that teachers' assessed verbal abilities (Ehrenberg and Brewer, 1995), and the selectiveness of the institution where teachers obtained their degree (Ehrenberg and Brewer, 1994) have an effect on students' performance. Rowan et al. (1997) show that maths teachers' knowledge of mathematics is positively associated with students' mathematics progress. So, while academic ability is far from being the only important characteristic of good teachers, it does matter. In particular, adequate subject knowledge is not a sufficient condition of good teaching, but it is surely a necessary one. The supply of teachers in Britain has fallen, as teachers' relative pay and status have declined substantially since the 1970s (although teachers' pay has risen since 1997), and there have been particular shortages of teachers with qualifications in maths and science (Chevalier et al., 2002). There was a considerable decline in the relative academic ability of men (but not women) entering teaching in Britain between the late 1970s and the early 1990s (Nickell and Quintini, 2002).

Given this context, schools in disadvantaged areas are unlikely to be able to attract their fair share of good teachers. There is a lack of information on the distribution of teachers according to their qualifications and experience, and Ofsted (Office for Standards in Education – the schools inspectorate) reports do not detail this type of information, despite its importance for school effectiveness (Bartlett, 2004). However, research shows that teachers in private and selective schools are considerably better qualified than comprehensive school staff (Smithers and Tracey, 2003). Given the difficult working conditions faced by teachers in disadvantaged schools, it would be necessary to increase teacher salaries in these schools or offer other incentives in order to attract sufficient high quality teachers to work in them (Brighouse, 2003).

## GOVERNMENT POLICIES

### *Choice and Diversity*

For those who can afford it, 'school choice' has always been provided by the private sector. Because Britain incorporated most denominational schools within the state sector, its private sector is relatively small. Throughout the last century, only 5-8 per cent of the school aged population has attended private schools (Smith, 2000). British private schools are socially and (often) academically exclusive institutions and the domination of elite occupations by alumni of the top private schools (or 'public schools') has long been apparent (Boyd, 1973). As a result, the existence of private schools has been seen as socially divisive and damaging, and as being closely bound up with British class divisions. Private schools can be seen as creaming off the most privileged children, and the effect of this on state schools is a particular concern in affluent cities, including London, where the proportion of children in private schools is far higher than the national average. Private schools also have a disproportionate share of the students taking A-levels, and regularly top academic league tables. However, research on the role of private schools during the tripartite era suggests that the success of these schools was largely due to their

academically and socially privileged intake of students (Feinstein and Symons, 1999; Sullivan and Heath, 2003). The government's attitude towards the private sector has been somewhat ambivalent. The abolition of the Assisted Places Scheme was a policy designed to appeal to Labour's grass roots, and the government has also criticised the domination of elite universities by private school students. On the other hand, the introduction of 'quasi-markets' to state education provision has been predicated on the view that the introduction of some of the 'disciplines' of the private sector will help to raise standards.

While these quasi-markets were introduced by the Conservatives, the current government has continued the promotion of diversity of educational provision and parental choice of schools. This policy has led to concern that schools may become less academically, socially and ethnically mixed. The possibility of social polarisation is worrying, not only because social mixing between children of different social classes and ethnic groups is worthwhile in itself, but also because of school composition effects on educational attainment. There is a consensus that school composition effects are important and that schools with a high proportion of students of low social status or low prior academic ability are at a disadvantage. For example, Levacic and Woods (2002b, 2002a) find the concentration of social disadvantage in a school relative to other local schools has a strong impact on GCSE improvement over time. These school composition effects may be due to the influence of peer groups on aspirations and behaviour, or they may be due to other processes, such as schools with low proportions of 'able' students finding it hard to attract good teachers.

In the education market, certain categories of student are more valuable than others. Schools are keen to attract 'able' and middle-class students, and girls (especially those from higher achieving minority ethnic groups) have also come to be seen as an asset (Ball and Gewirtz, 1997). Less popular schools can become male-dominated, as parents demand single-sex schooling for girls more often than for boys. Researchers have documented the way middle-class parents marshal a host of resources to get their children into their preferred schools. Money, cultural capital, social capital, and sheer pushiness are all relevant (Carroll and Walford, 1997; Gewirtz et al., 1995; Glatter et al., 1997; West et al., 1991; Woods et al., 1998; Ball, 2003). Studies have suggested that this leads to greater social segregation and polarisation within the school system (Whitty et al., 1998). But has increased parental choice of school in the UK actually led to more or less polarisation between schools compared to the previous system based on stricter catchment areas and 'selection by mortgage'? (Gorard and Fitz, 2000). Gorard and his colleagues (Gorard et al., 2003; Gorard and Fitz, 2000; Gorard, 2003) have carried out research into school segregation in England and Wales from 1989-2001, focusing on the spread of children eligible for Free School Meals (FSM). Their 'Index of Segregation' is defined as the proportion of students who would have to change schools for there to be an even spread of disadvantage between schools within an area of analysis. For England and Wales, segregation by FSM declined from 35 per cent in 1989 to 30 per cent in 1995, but rose to 33 per cent between 1997-2001. Segregation by ethnicity, SEN, and English as an additional language

declined throughout the period. However, social segregation was greater in areas which contained selective schools.

These findings have been controversial (Gibson and Asthana, 2000; Gibson and Asthana, 2002; Noden, 2002; Noden, 2000; Gorard, 2000; Gorard, 2002). Much of the criticism levelled at Gorard et al. seems to be based on the view that they claim a causal link between decreased segregation and the introduction of the quasi-market. However, Gorard et al. acknowledge that their research cannot isolate the effect of marketisation, and argue that the level of social segregation is driven largely by social and demographic factors.

Several authors have pointed out the crudity of FSM as a measure of socio-economic status (Gorard et al., 2003; Goldstein and Noden, 2003; Brighouse, 2003). Goldstein and Noden (2003) also point out that the instability of the FSM measure is an obstacle to isolating the impact of marketisation, and a more stable measure of children's social background would be preferable. Furthermore, it needs to be emphasised that FSM is a measure of poverty, and researchers and policymakers should not restrict their interest to the distribution of poor students between schools. It may be that having a critical mass of middle-class students is a more important driver of school success than having a low proportion of students in poverty. We need richer data on students' socio-economic backgrounds in order to examine segregation in proper detail.

A related concern is raised by the possibility that officially 'non-selective' schools, including faith and specialist schools, in fact attract, or even covertly select, particular social groups. Indeed, many critics of New Labour's adoption of the Conservative diversity and choice agenda fear that the mix of specialist schools, faith schools, academies etc. will recreate the tri-partite system, both academically and socially.

The government's encouragement of faith schools relies on some assumptions about their academic performance that still need to be tested. Observers of Catholic schools in the USA (Coleman et al., 1982; Bryk et al., 1993) and in Britain (Grace, 2002) suggest that the relative success of these institutions, particularly with some minority ethnic and disadvantaged groups, may be dependent upon strong levels of social capital within such schools and the communities that they serve. Although at least part of their relative success can be attributed to differences in the academic quality of their intakes, or different patterns of exclusion and differences in academic programmes on offer, there may still be a residual effect of 'community', both in-school and beyond school. If, however, that is the product of the strong 'bonding' (within community) capital in such schools rather than 'bridging' (cross community) capital (Putnam, 1995), this potentially creates a tension between the government's standards agenda and its inclusion agenda. We therefore urgently need to explore how positive forms of social capital can be developed in multi-ethnic and multi/non-denominational schools serving diverse populations.

Much is again made of the apparent capacity of specialist schools to outperform other secondary schools in terms of their examination performance. Recent key stage 4 results show specialist schools as not only performing relatively better than supposedly comparable non-specialist schools, but also performing relatively better

in official value-added terms (Jesson and Taylor, 2001; Smith, 2004). This evidence is highly contentious and has rarely been subjected to adequate peer review in advance (Schagen and Goldstein, 2002). More rigorous research studies are needed to determine the validity of the claims on either side and assess the impact of specialism, selection and resources on the relative performance of specialist and other schools (Edwards and Tomlinson, 2002).

In the context of the national curriculum, having a curriculum specialism may not in itself differentiate schools significantly. The far more serious threat to the comprehensive ideal comes from the effect that the extra resources and the cachet of the specialist school label may have on recruitment. The early evidence on FSM eligibility in specialist schools suggested that the intakes of such schools might well be socially unrepresentative, though this may be more associated with prior school type than with specialism per se (Gorard and Taylor, 2001). Others have claimed that, as the proportion of such schools increases potentially now to 100 per cent this phenomenon is decreasing (Taylor, 2001).

Given that diversity in secondary education will doubtless remain in place for the foreseeable future, what is crucial is to prevent legitimate differences from becoming unjustifiable inequalities and to stop particular social groups monopolising particular sorts of schools. However, as there is evidence that segregation effects increase where larger numbers of schools are their own admissions authorities (Goldstein and Noden, 2003), this would require greater standardisation of admissions criteria and monitoring of their application, moving well beyond the recently introduced coordinated admissions schemes.

### *Raising Standards and Educational Expansion*

Labour has extended the national curriculum, introducing national literacy and numeracy strategies, now subsumed in an overall primary strategy, which sets out a framework of teaching for all pupils, including daily literacy hours. There is also a key stage 3 strategy for 11-14 year olds that is now part of a wider secondary strategy. The key stage testing introduced by the 1988 Education Act has been extended. Schools have been asked to meet ambitious targets for improved performance at each key stage (at ages 7, 11, 14 and 16). The combination of testing and league tables is designed to give schools an incentive to improve their performance. A key aim is to deal with Britain's 'long tail' of low achievement by raising standards at the bottom end of the distribution.

The publication of league tables of school results has formed a key part of the government's drive to raise standards. 'Value added' tables have been introduced in order to reflect the fact that schools' intakes differ in terms of their prior attainments. The problems associated with 'value added' tables have been discussed extensively by Goldstein, and in a Statistics Commission report (2004)<sup>1</sup>. A fundamental problem with the value added scores is that they control only for pupil attainment at the previous key stage, and there are no controls for socio-economic

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1 Available at [http://www.statscom.org.uk/media\\_pdfs/correspondence/letter0187.pdf](http://www.statscom.org.uk/media_pdfs/correspondence/letter0187.pdf)

background. Therefore value added scores should not be seen as a measure of school performance, yet they have been presented by DfES as showing “those schools that perform better than other schools in similar circumstances” (Phipps, 2003).

Government has claimed that the numeracy and literacy strategies have been highly successful in raising standards. However, it is actually rather difficult to assess what impact these strategies have had. Bartlett (2004) has pointed out that, while the percentage of students achieving Level 4 in key stage 2 English exams increased by ten percentage points between 1998 (when the National Literacy Strategy was introduced) and 2000, there had been an increase of eight percentage points in the 2 years preceding the introduction of NLS. If things were already improving before the introduction of NLS, we cannot be confident that NLS caused the improvement between 1998 and 2000. The data is consistent with the view that the introduction of testing in itself was instrumental in raising standards, independent of the NLS. The claim that improvements in maths test scores are due to the introduction of the National Numeracy Strategy is similarly questionable (Goldstein, 2003).

Nevertheless, the combination of key stage testing and the publication of schools’ key stage and examination results, has provided a powerful incentive for schools to increase the attainments of their pupils. This is likely to have had a very positive impact on pupils at key borderlines such as the C/D borderline at GCSE. Although there are concerns that pupils who fall below this level are not seen as a priority, due to the structure of incentives facing schools (Gillborn and Youdell, 2000), it should not be assumed that this implies that working class and minority ethnic students would benefit from the abolition of externally assessed key stage tests and GCSEs. While such tests and examinations can be culturally biased (Mortimore and Whitty, 2000), teachers’ own assessments can be affected by responses to the non-academic characteristics of students such as gender, ethnicity, social class, perceived character and physical attractiveness (Dusek and Joseph, 1983; Bennett et al., 1993; Doherty and Hier, 1988).

A particularly important equity gain from the introduction of the National Curriculum has been the increased participation of girls in mathematics and science up to GCSE level, which has allowed girls to demonstrate that they are capable of high achievement in these subjects. The reintroduction of earlier choice, including that proposed by Tomlinson (2004), could undermine these gains. Without real progress towards parity of esteem for different curricular tracks, early (and relatively uninformed) choice could also disadvantage working class students and some minority ethnic groups, as they would be more likely than others to abandon prestigious options.

At GCSE level, there has been a general trend for social class inequality to reduce over time, as overall attainment levels have increased. For example, as the proportion of middle class students getting at least one good GCSE pass has approached 100 per cent, the middle class rate of improvement over time has slowed, and working class levels of attainment have caught up. (Sullivan et al., 2004). The higher the benchmark of attainment, the higher the level of social class inequality. So, the social class gap in getting eight good GCSE passes is greater than

the gap in getting five good passes, which in turn is greater than the gap in getting one good pass. While all ethnic groups have improved their GCSE performance over time, patterns of improvement have varied according to ethnicity. From 1992-2000, Youth Cohort Study data show all ethnic minority groups except Pakistanis making more progress than whites.

The expansion of the numbers of students in further and higher education (HE) has continued, and tuition fees have been introduced to fund the expansion of HE. The government's declared aim is to 'widen participation' in HE. However, the expansion in HE has been accompanied by increased inequalities between rich and poor individuals (Blanden and Machin, 2004) and between people from poor neighbourhoods and better-off neighbourhoods (Galindo-Rueda et al., 2004). The social class gap has increased in absolute terms and stayed constant in proportionate terms (Sullivan et al., 2004). Increased levels of performance at A level, and increased levels of participation in HE have heightened competition for access to prestigious universities and courses. Higher education performance indicators<sup>2</sup> show a general pattern for the most academically selective institutions to be most dominated by middle class students.

Educational expansion is generally seen as progressive, and as providing opportunities for groups of people who were previously excluded from educational participation. However, it is well documented internationally that increased overall rates of educational participation do not necessarily lead to a reduction in the association between social class and educational participation (Shavit and Blossfeld, 1993). The gap between social classes generally increases in the early stages of expansion, as the middle classes are able to take up the new opportunities at a faster rate. As the middle classes approach saturation point, the increase in their rate of participation slows, allowing the working classes to catch up (Boudon, 1974). Nevertheless, we have to acknowledge that a qualification diminishes in value as it becomes near-universal. A qualification that everyone holds has no labour-market value. So reductions in social class differentials in educational attainment that are achieved through overall increases in attainment may not have strong consequences for later social mobility.

## CONCLUSIONS

We need to recognise the continuing importance of social class as a determinant of educational outcomes. Social class is vastly more important in this respect than either ethnicity or gender, yet policymakers are far happier to talk explicitly about gender and ethnicity, and often exaggerate the importance of gender in particular. Studies which contain no controls for social class often claim that the differences they describe are net of social background, but failing to measure social class won't make it go away. Administrative datasets such as the National Pupil Database need to include rich measures of social background, rather than just FSM. We cannot come to informed conclusions on issues such as school segregation and school

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<sup>2</sup> Published in the Times Higher Education Supplement 21/05/04, compiled from HEFCE and HESA figures.



effectiveness without better data. Both researchers and policymakers need to be honest about the limitations of the evidence they are using, and what the research can and cannot show.

It is therefore encouraging that the government's Five Year Strategy for Children and Learners begins by highlighting the huge influence of social class on early development in this country. The document refers to Feinstein's work (2003) showing that children from higher social class origins, but with low test scores at age 2, overtake children from lower social class origins, but with high test scores at age 2, by the time they reach age 7. It is less encouraging that some of the policies for schools advocated later in the strategy document may exacerbate rather than mitigate the effects of social class on educational attainment and participation. There is relevant research evidence on these matters that needs to be weighed carefully rather than dismissed or ignored on the grounds of its inconvenience for policy.

As well as better data on students, we need better data on teachers. Research suggests that differences in effectiveness between teachers are greater than those between schools, yet most school effectiveness research has not considered the implications of the possibility that good teachers are an unequally distributed resource. We agree with Bartlett's (2004) proposal that the government should collect and distribute data on teacher qualifications and experience in a form that permits cross-analysis with student demographics and achievement statistics.

Schools in disadvantaged areas face several major obstacles: 1. Pupils arrive at school with lower levels of attainment. 2. Pupils do not have the same home resources to support learning that more advantaged children have. 3. Social norms within the peer group may be less supportive of learning, and the wider community outside the school may also lack the kind of social capital that supports learning. These factors can lead to disruptive behaviour. 4. Schools in disadvantaged areas may lack key resources such as good teaching staff, especially in shortage subject areas.

Given all these factors, it should come as no surprise that having a high proportion of FSM pupils in a school is associated with poor OFSTED scores (Lupton, 2004). We fully acknowledge that it is not acceptable for schools to use a low socio-economic profile as an excuse for low expectations and low standards. Nevertheless, judgements on the effectiveness of schools in disadvantaged areas need to take the obstacles faced by these schools into account. It is not good enough to control the percentage of FSM students and then say that all remaining between schools differences can be attributed to the school alone. Government policies to raise standards in schools with high proportions of disadvantaged students need to take into account the particular problems faced by these schools, and to provide additional support. For example, Brighouse's (2003) suggestions that teachers need greater incentives to work at disadvantaged schools, and that cuts in class sizes should be focused on disadvantaged children rather than spread across the whole population, deserve serious consideration.

The concentration of disadvantaged children in particular schools will also need to be addressed, as the importance of social and academic mix to both the standards and the inclusion agendas is widely recognised by researchers. There are still too

many schools in urban areas which have been colonised by particular social groups either deliberately or by default. Recent recommendations on school admissions from the House of Commons Select Committee (2004) could at least reduce the abuses that exacerbate this effect.

Nevertheless, we need to be realistic about the impact of education policy on social inequalities. Government needs to acknowledge that 'schools cannot compensate for society'. Educational policies alone are never likely to eradicate class inequalities in educational attainment. Policies to reduce inequalities in the distribution of income may have a greater impact on educational inequalities than educational policy can (Robinson, 1997). It should be borne in mind that a reduction in educational inequalities will not automatically lead to more equal social mobility chances, and, especially in the cases of ethnic and gender inequalities, inequalities in the labour market need direct attention. Women and minority ethnic groups have made great strides in terms of educational attainment, yet still suffer clear labour market discrimination. An exclusive focus on education policy will not resolve this problem.

Finally, even the focus on social mobility may be questionable as the primary policy aim, since high levels of social mobility can co-exist with extreme inequalities in standards of living which may have equally damaging social consequences.

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# Achievement Gaps Among Racial-Ethnic Groups in the United States

## Changes in Families and Schools

*Mark Berends and Samuel R. Lucas*

### INTRODUCTION

As schools in the United States become more and more output driven within the context of current federal and state educational policies, students, educators, administrators, and policymakers are being held accountable for improving the academic achievement of all students. In particular, as our society continues to become increasingly diverse, there is now a national focus on the achievement gaps between students of different social backgrounds (socioeconomic, racial-ethnic, language and disabilities). In fact, with the recent passage of the No Child Left Behind Act of 2001 (NCLB), federal education policy now mandates that states, districts, and schools monitor achievement gaps among different student groups.

Systematic empirical examination of these achievement gaps may provide important information on school improvement efforts. Analyses of how individual, family background and school characteristics are associated with different achievement levels are important in such empirical examinations. Moreover, understanding changes in family and school factors and student achievement trends and their interrelationships is important for understanding how the educational system contributes to inequities in our society.

Current educational reformers in the U.S. stress raising the achievement of the entire population while reducing disparities among groups, which is certainly an important goal despite being a significant challenge (Berends et al., 2002; Jencks and Phillips, 1998). In part, the concern over some of these achievement gaps — for example, those between racial-ethnic groups — has been heightened by growing diversity in the United States. The recent NCLB legislation reauthorising Title I, the largest federal funding program aimed at disadvantaged students, requires states to report achievement gaps between certain subgroups to help schools, districts and states decrease achievement gaps over time.

Specifically, NCLB states that the purpose of Title I is to ensure that all children have a fair, equal and significant opportunity to obtain a high-quality education and reach, at a minimum, proficiency on challenging state academic achievement standards and state academic assessments. This purpose can be accomplished by closing the achievement gap between high- and low-performing children, especially the achievement gaps between minority and nonminority students, and between disadvantaged children and their more advantaged peers.

In this paper, we empirically examine several family- and school-based explanations for racial-ethnic test score differences in mathematics over a twenty-



year period, using data available for several national cohorts of high school seniors between 1972 and 1992. We address the following research questions: (1) How did the test scores of blacks, Latinos, and whites change between the early 1970s and 1990s?<sup>1</sup> (2) How did selected family and school measures change over this time? (3) To what extent were changes in these measures associated with the convergence of the black-white and Latino-white test score gaps that occurred during this time? and (4) What are the policy implications that arise from our empirical analyses examining how changes in families and schools are related to student gaps in mathematics achievement?

Because of the ongoing debates about families and schools, it is important to consider a more complete set of family and school changes that have taken place and to apply multivariate methods for estimating the net associations among changes in these measures and student achievement. In addition, researchers have only infrequently assessed such associations among family and school measures and student achievement with several different longitudinal national cohorts. Additional empirical analyses need to be done to place current student achievement scores in the context of long-term test score trends, to examine the relationships between these test score trends and changes in families and schools, and to address changes in educational policies (e.g., school desegregation, tracking and ability grouping, standards-based reform).

#### STUDENT TEST SCORE TRENDS BETWEEN THE 1970S AND 1990S

What is the context of long-term test score trends in the United States? How did the test scores of black, Latino, and white students change between the early 1970s and early 1990s? Students, especially black and Latino students, are scoring higher on mathematics and reading tests today than they were a few decades ago. Figures 4.1 and 4.2 show these trends for 17-year-old students between the early 1970s and the late 1990s on the National Assessment of Educational Progress (NAEP) mathematics and reading tests (see Campbell, Hombro and Mazzeo, 2000). Overall, U.S. high school students today are scoring about the same as they were in the early 1970s in mathematics and reading.

These overall trends mask significant progress made among certain groups. For instance, over the past thirty years, minority students made substantial progress towards closing the minority-nonminority test score gap in both mathematics and reading. In 1999, black students scored thirteen points higher (or 14 percentile points) on the NAEP mathematics test and about twenty-seven points higher (or 21

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1 The focus of our analysis is on black, Latino/Latina, and non-Latino/a students. Such classifications are not without controversy and at times confusing. For example, non-Latino/as could include individuals who are black. Our analyses use the student self-reported racial-ethnic classification to create nonoverlapping categories for blacks, Latinos and whites. Rather than use the cumbersome language of Latino/a and non-Latino/a, we simply refer to these student groups as blacks, Latinos and whites.

percentile points) in reading than those in the early 1970s. Similarly, Latinos made large improvements in achievement. Between 1973 and 1994, Latinos gained sixteen points on the NAEP mathematics test, or 16 percentile points, and between 1975 and 1994 Latinos gained eleven points in reading, or 17 percentile points.

In the late 1990s, as the minority trend lines in Figures 4.1 and 4.2 show, black and Latino students' gains in reading have not continued to increase as they did in the 1970s and 1980s. However, minority students are still performing markedly higher than similar students did over 25 years ago (see Porter 2005).

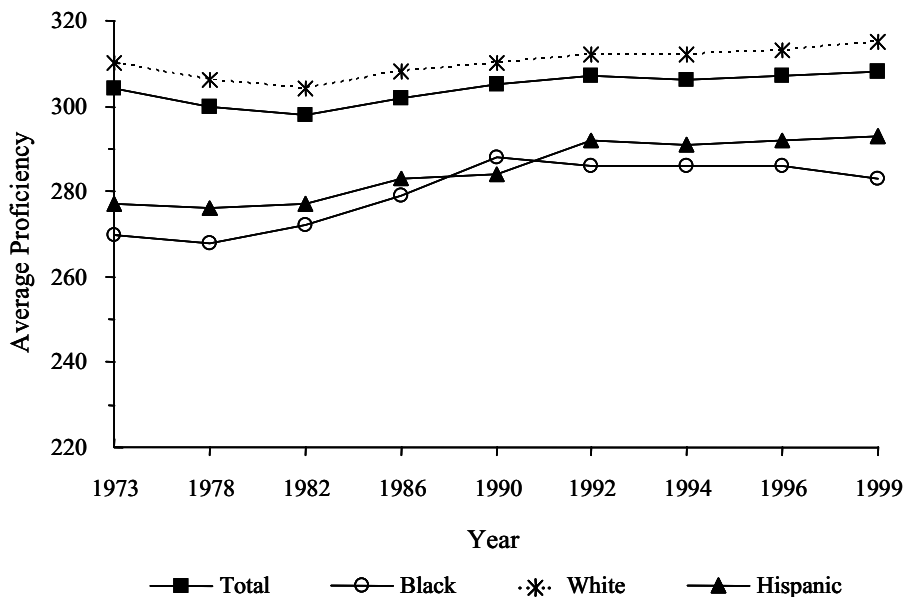


Figure 4.1: NAEP Mathematics Proficiency for 17-Year-Olds by Race-Ethnicity

Source: U.S. Department of Education. Office of Educational Research and Improvement. National Center for Education Statistics. *NAEP 1999 Trends in Academic Progress: Three Decades of Student Performance*, NCES 2000-469, by J.R. Campbell, C.M. Hombro and J. Mazzeo. Washington, DC: 2000.

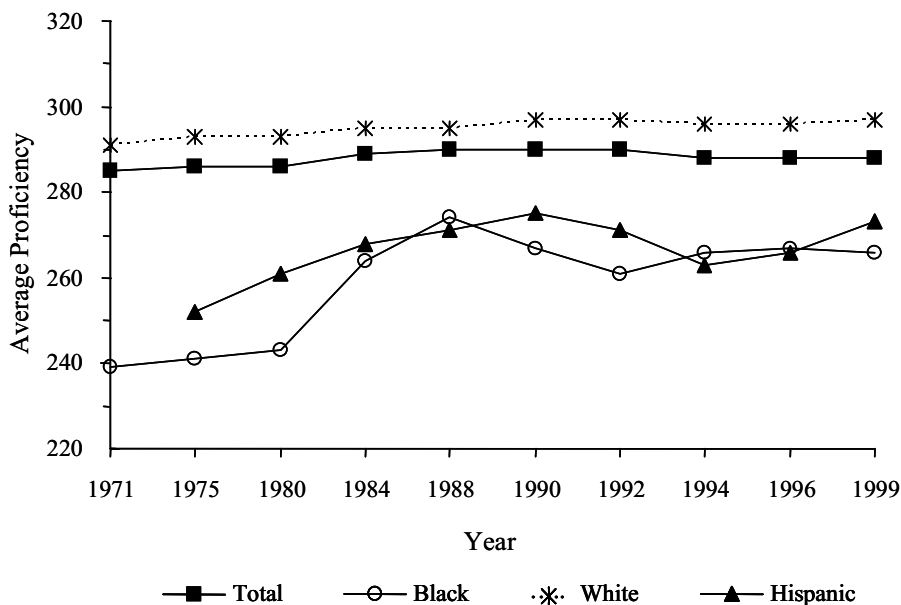


Figure 4.2: NAEP Reading Proficiency for 17-Year-Olds by Race-Ethnicity

Source: U.S. Department of Education. Office of Educational Research and Improvement. National Center for Education Statistics. *NAEP 1999 Trends in Academic Progress: Three Decades of Student Performance*, NCES 2000-469, by J.R. Campbell, C.M. Hombro and J. Mazzeo. Washington, DC: 2000.

#### FAMILIES, SCHOOLS AND STUDENT TEST SCORE GAPS

Although many researchers have proposed reasons for why the test score gaps have closed over the past several decades (e.g., Ferguson, 1998; Koretz, 1986; 1987; Porter, in press), only a few researchers have been able to study empirically how changes in family background and school factors are related to the test score convergence that occurred (Cook and Evans, 2000; Grissmer et al., 1994; Grissmer, Flannagan and Williamson, 1998; Hedges and Nowell, 1998). The main reason for this is the lack of data for multiple student cohorts that will allow for the examination of relationships between family and school measures and student achievement gaps.

A few studies have been able to examine how changes in family background factors relate to student achievement gaps in national data. For example, Grissmer et al. (1994) were specifically interested in how changes in families related to the test score gaps among black, Latino, and white students. In their analyses of the National Education Longitudinal Study of 1988 (NELS:88) and the National

Longitudinal Survey of Youth (NLSY:80), they described how students' family background (parents' educational attainment, family income and mother's work status) and family structure (family size, age of mother at child's birth and single mother household) were related to mathematics and reading achievement.

Grissmer et al. estimated the net effects on mathematics and reading scores of several important family changes occurring between the early 1970s and 1990s and provided information about what non-family factors may have contributed to achievement trends. Specifically, the study examined how achievement scores would change for 14 to 18-year-olds raised in families of the 1950s and 1960s compared to families of the 1970s and 1980s. In addition to estimating the effects of family changes on overall test scores, Grissmer et al. also estimated the effects for different racial-ethnic groups. Moreover, Grissmer et al. compared actual changes in NAEP achievement to those predicted by changes in family characteristics. This approach produced "residual estimates" that provided indicators of the effects of factors operating outside the family. These residuals were obtained by comparing the predicted test score changes to actual changes in test scores based on the National Assessment of Educational Progress (NAEP) during the time period of the study.

Grissmer et al.'s findings revealed that black, Latino, and white academic achievement should have risen between the early 1970s and early 1990s. Overall, they predicted a gain of about .20 of a standard deviation for 14 to 18-year-old youth in 1990 compared to similarly aged youth in 1970. They found that the major factors leading to higher predicted test scores were the markedly higher education levels for 1990 parents and smaller family size. Children in 1990 were living with better-educated parents, in smaller families, with more income per child. Grissmer et al. concluded that the effect of these factors far outweighed the negative impact of more single parent families, a small shift in births to younger mothers, and the changing racial/ethnic composition of the American population.

When estimating the effects of family changes for different racial/ethnic groups, Grissmer and colleagues also predicted positive test score gains. Black and Latino students made sizable gains in test scores over and above the gains that family changes would predict, while white students did not. Grissmer et al.'s results suggested that changes in minority family characteristics – when considered together – were more supportive of student achievement in 1990 than in the early 1970s. Although their analyses fully accounted for the gains of white students, they concluded that changing family characteristics accounted for no more than about a third of the gain for black and Latino students. Attempting to explain what factors outside the family were related to the black and Latino achievement gains, the RAND researchers suggested that changes in educational policies and public investment may have been influential, although further research was certainly needed (see Berends et al., 1999).

In subsequent research, Grissmer et al. (1998) extended their analysis by examining what factors may have contributed to the test score gap convergence between black and white students. Although this later study did not examine Latino-white test gaps, some of the factors they examine may have contributed to the

closing of that gap as well. Grissmer et al. (1998) moved beyond changes in family characteristics and reviewed factors that may have changed between the early 1970s and the early 1990s, such as desegregation, secondary school tracking, changes in the curriculum, per pupil expenditures, pupil-teacher ratios, teachers' educational background and experience, and school violence. Based on their review of extant research, Grissmer et al. concluded that both social investment in the 1960s and 1970s (i.e., the civil rights movement and the War on Poverty programs) and school-based changes (desegregation, secondary school tracking, and class size) were the likely candidates that explain the closing of the test score gap between black and white students.

Building on the research by Grissmer and colleagues, Hedges and Nowell (1999) were also interested in the achievement gaps among students over the past thirty years and how family background characteristics were related to any changes in those gaps. In their study of several national data sets from the early 1960s to early 1990s, Hedges and Nowell (1998, 1999) pointed out several limitations of Grissmer et al.'s (1994) research. Their criticisms were aimed at Grissmer et al.'s assumptions that the effects of family characteristics on student achievement remained the same between the early 1970s and 1990s and that all unexplained changes in the test score gaps were attributable to social and educational policies. Hedges and Nowell addressed some of these problems by analyzing all the national data available for the period 1965 to the early 1990s that included student test scores together with family characteristics such as parents' educational attainment, family income, and mother's work status.<sup>2</sup>

Similar to Grissmer et al. (1994), Hedges and Nowell found that the black-white test score gap did narrow significantly over time when they examined changes in mean achievement levels. In addition, their analyses of family background characteristics accounted for roughly one third of the achievement gap, which is also similar to the Grissmer et al. findings. However, in contrast to Grissmer et al., Hedges and Nowell found that the relationships between family characteristics and student achievement were not constant over time. Moreover, Hedges and Nowell argued that we need more direct measures of educational policies that may have contributed further to the closing of the gap.

Although making a significant contribution to our understanding of black-white test score trends as they relate to family characteristics, the Hedges and Nowell study is not without limitations. First, the measures of family characteristics (e.g., family income and parents' education) were not operationalised in the same way. For example, in the 1965 Equality of Educational Opportunity data, Hedges and Nowell used possessions in the home as a proxy for family income because information on income was not available in these data. Second, Hedges and Nowell

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2 These data include the Equality of Educational Opportunity survey of 1965 (EEO), the National Longitudinal Study of the High School Class of 1972 (NLS-72), the High School and Beyond surveys (HSB), The National Longitudinal Surveys of Youth of 1980 (NLSY:80), the National Education Longitudinal Study of 1988 (NELS:88) and the National Assessment of Educational Progress (NAEP).

were not able to examine changes in schools that occurred during the early 1960s and 1990s, and they raised the importance of such analyses. Finally, although beyond the scope of the Hedges and Nowell study, it was unfortunate that they did not examine changes in the Latino-white test score gap as they did for the black-white gap.

Extending research to examine school quality, Cook and Evans (2000) were specifically interested in whether it was changes in family characteristics or changes in school quality (or both) that were associated with the narrowing of the black-white test score gap over time. Analyzing the National Assessment of Educational Progress (NAEP) trend assessment, their research focused on not only how changes in mean levels of family and school characteristics were related to the black-white test score trends, but also how the relationships between family and school measures were related to achievement differences in reading and mathematics. They found that only about twenty-five per cent of the overall convergence in black-white test scores could be attributed to changing family and school characteristics. They argued that the remainder is due to changes within schools.

The Cook and Evans (2000) study has several strengths. First, they were able to make fewer assumptions than the studies reviewed above. For example, Cook and Evans examined tests that were stable over time, in contrast to Grissmer et al. (1994, 1998) and Hedges and Nowell (1998, 1999). In addition, their methods allowed them to examine how changes in the relationships between their measures and student achievement differ over time, unlike Grissmer et al.'s work, which assumed stability of these relationships. Finally, they extended the critical work on changes in families to include changes in school quality when examining the black-white test score gap.

However, their study also has its limitations. First, they were limited to examining family background changes as measured by parent educational attainment. Unfortunately, the NAEP is very limited in terms of family background measures because it lacks information on parent income, parent occupational status, and other family characteristics (Berends and Koretz, 1996; Grissmer et al., 1998). Second, their measure of school quality was lacking in that they assume that "school quality is the effect that attending a given school has on student performance after controlling for the student's observable characteristics" (Cook and Evans, 2000, p. 732). Although they discuss how omitted variable biases may affect their results, their analyses lacked direct measures of schools, how these school measures changed, and how these changes were associated with student test score gaps. Third, similar to Hedges and Nowell (1998, 1999), their focus was on the black-white test score gap, and they did not examine Latino-white test score differences.

Thus, despite this important past research, questions remain about achievement differences among black, Latino and white students and about what family and school factors are associated with achievement gaps over time. Our analyses aim to build on the work of Grissmer and colleagues (1994, 1998), Hedges and Nowell (1998, 1999) and Cook and Evans (2000) with data for three senior cohorts in 1972, 1982 and 1992. Although decomposing the black-white and Latino-white achievement gaps into changes in families and schools is a complex exercise

(Berends et al., 1999; Grissmer et al., 1998), we believe our analyses make important contributions. For instance, similar to Cook and Evans, we attempt here to use methods that allow for an examination of changes in mean levels of family and school characteristics and changes in the relationships of these characteristics to student achievement. However, we do so by using data that have several direct measures of students' family and school characteristics, measured consistently over time. In addition, unlike some past studies, we equate the mathematics achievement tests over the 1972, 1982, and 1992 student cohorts to make the achievement measure comparable over time.

Our analyses provide results about specific family and school factors that are related to student achievement trends, particularly the black-white and Latino-white mathematics test score gaps for students in high schools. No studies have comprehensively analyzed several family and school measures across nationally representative data for different cohorts of high school seniors with comparable achievement outcomes. Our study aims to fill this gap.

## DATA AND METHODS

In this study, we focus on student mathematics achievement and family and school measures that we could consistently measure over time across nationally representative cohorts of high school seniors. We believe it is an important contribution to analyze family, school and achievement measures between 1972 and 1992 that have been operationalised in the same way (for more details about variable justification and operationalisation, see Berends et al., 2005). Moreover, these national data we analyze cover the same periods as the studies by Grissmer et al. (1994), Hedges and Nowell (1998, 1999), and Cook and Evans (2000), so our findings can be directly compared with their research and thereby extend our knowledge about the contributing factors to black-white test score trends.

In what follows, we analyze three cohorts of high school seniors in nationally representative data sets that cover the experiences of secondary school students in the United States between 1972, 1982, and 1992. The data sets are:

- NLS of the high school class of 1972 (NLS-72)
- HSB senior cohort of 1982 (HSB-82)
- NELS senior cohort of 1992 (NELS-92)

These national data sets are part of the LS program of the National Center for Education Statistics (NCES), so hereafter we refer to these data sets as "LS data," which we later compare to the trend assessment of the National Assessment of Educational Progress (NAEP). In what follows, we discuss the data sets analyzed, the operationalisation of the individual, family, and school measures analyzed across the data sets, and our methodological approach.

## NATIONAL LONGITUDINAL STUDY OF THE HIGH SCHOOL CLASS OF 1972

NLS-72 was designed to produce representative data at the national level on a cohort of high school seniors who graduated in 1972. The base-year sample was a stratified, two-stage probability sample of students from all public and private schools in the United States, with schools as the first-stage units and students within schools as the second-stage units. The result is a nationally representative sample of 19,000 seniors in 1,061 high schools (Riccobono et al., 1981). Student, school administrator and test score data are available for measuring students' academic achievement and individual, family, and school characteristics. We analyzed information about the school and data from student tests and student questionnaires. The student questionnaire was completed by 16,683 high school seniors. Because we wanted complete data from the student questionnaires, the students' mathematics test, and the school information form, the sample for our analyses was reduced to 14,469 students in 875 schools.

### HIGH SCHOOL AND BEYOND

Similar to NLS-72, HSB is a two-stage stratified probability sample with schools as the first-stage units and students within schools as the second-stage units. In the first stage 1,100 schools were selected, and in the second stage about 36 students were randomly selected in each school. Some types of schools were oversampled to ensure adequate numbers of students were available in subpopulations of interest. We analyzed the sample of about 26,000 students who were sophomores in the 1980 base year sample and were followed up as seniors in 1982. The follow-up sample retained the essential features of the base-year design: multistage, stratified and clustered (see Jones et al., 1983).

HSB was unique in that it gathered data on two high school grade levels in 1980 (tenth and twelfth grades). Both the sophomore and senior cohorts in HSB have information on students, schools, and test scores. The sophomore cohort was followed up two years later when the students were seniors (HSB-82). Although we used the 1980 senior cohort (HSB-80) to equate students' mathematics scores over time (see Berends et al., 2005), our descriptive and multivariate analyses of the effects of family and school measures on student achievement revealed no significant differences between the 1980 and 1982 senior cohorts. For the sake of parsimony and presentation, we thus present the 1972, 1982, and 1992 comparisons when examining how trends in the mathematics gap related to changes in family and school measures.

### NATIONAL EDUCATION LONGITUDINAL STUDY

NELS is a nationally representative data set that includes detailed information from students, schools, and parents (Ingels et al., 1993). The 1988 base-year NELS included about 25,000 eighth-grade students in 1,035 schools. Students in NELS



were followed up in the tenth grade (1990), twelfth grade (1992), two years after high school (1994), and in the year 2000. These data contain extensive information about the achievement and school experiences of students prior to high school entry, data on school organisation in middle and high school, students' family and demographic characteristics, and students' experiences beyond high school. In each of the first three waves of NELS students were tested in various subject areas.

## NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS

When examining test score trends, we compare our estimates in the LS data sets to the NAEP trend assessment, which contains information over time on the same set of test score items for nationally representative samples of students. Although NAEP collects information on the same items over time, NAEP data lack critical information about individual, family, and school characteristics needed to examine family and school-based explanations over time (see Berends and Koretz, 1996). However, NAEP provides a useful benchmark against which to compare the test score trends in NLS-72, HSB-82, and NELS-92 (Green et al., 1995).

## DEPENDENT MEASURE

### *Mathematics Achievement*

The dependent variable in our models is the individual student mathematics test scores, assumed to be a function of a set of independent individual, family, and school variables that are directly comparable in the senior cohort data sets. The group differences that are the focus of this paper are those between black and Latino and white students during their senior year of high school.

In order to more accurately measure the extent of group differences within each of the senior cohorts, we linked the mathematics tests over time and calibrated them to be on the same scale so that it is as though students across cohorts had taken the same test (see Berends et al., [2005] for details on linking procedures). Because the reading, science, and social studies tests did not have items in common across the cohorts, we were limited to mathematics. However, because of both the sensitivity of mathematics tests to school effects and the variation in mathematics scores across schools (Sørensen and Morgan, 2000), it is important to understand trends in mathematics achievement and how other family and school changes relate to them, particularly for students from different racial-ethnic groups.

To link the mathematics achievement tests among the senior cohorts, we calculated test scores using Item Response Theory (IRT) (see Lord, 1980; Hambleton, 1989). IRT assumes that a test taker's probability of answering an item on a test correctly is a function of his or her proficiency level and other characteristics of the test itself. For instance, in a three-parameter IRT model, aspects used to mathematically determine a student's score include how well a particular item distinguishes between proficiency levels at a particular point, the

difficulty of the item, and the extent to which a student can guess the item correctly (“guessability” of the item). These aspects are used to place each test taker at a particular point (i.e., theta or  $\theta$ ) on a continuous proficiency scale. Essentially, this linking procedure allows us to examine what test scores would be if all students over the years had taken the 1972 test in mathematics.

Although IRT methods provide accurate measures of student scores throughout the proficiency distribution, it is important to remain aware that the tests do differ; they are not identical across the different cohorts.<sup>3</sup> However, the tests are similar in structure and the domains tested, and they do contain some common items to use for equating purposes. Moreover, research to date suggests that the tests across these cohorts are reliable and valid measures of students’ mathematics achievement in secondary school (see Berends et al., 2005; Koretz and Berends, 2001; Rock, Hilton et al., 1985; Rock and Pollack, 1995).

### FAMILY AND SCHOOL MEASURES

The definitions for the other measures in our models are matched across the data sets for the three senior cohorts. Our selection of variables was dictated by the necessity of comparable measures across the data sets (NLS-72, HSB-82, and NELS-92). We analyzed a number of variables to examine student test score differences so as to extend past research on student test score gaps, with a particular emphasis on how changes in families and schools related to the black-white mathematics test score gap (Cook and Evans, 2000; Grissmer et al., 1994, 1998; Hedges and Nowell, 1998). The measures we analyze include individual characteristics (race-ethnicity and gender), family background (parents’ educational attainment, occupational status, and family income), and school characteristics (socioeconomic and minority composition, sector, urban locale). (For a detailed description of these measures, see Berends et al., 2005).

We also examine a social-psychological measure of track placement (Gamoran, 1989; Lucas, 1999; Lucas and Gamoran, 2001), a measure that deserves further comment. The survey question administered across the different cohorts asked students to describe their high school program as being academic or college-bound, general, or vocational. We created a new variable that compared students in the college or academic track to those in the non-academic track. The structure of tracking has certainly changed between the early 1970s and the 1990s. Rather than

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3 To measure a broader range of abilities and the extent of cognitive gains between eighth and twelfth grades, NELS included various forms of the tenth- and twelfth-grade tests to avoid floor and ceiling effects. For example, tenth graders in the first follow-up test administration were given different forms of the test depending on how they scored in the eighth grade base year. In mathematics, there were seven forms, and in reading there were five forms – all differing in difficulty to provide better estimates of achievement throughout the proficiency distribution (for further details on the psychometric properties of the NELS tests, see Rock and Pollack, 1995). Specific test score information allowed us to link scores across all these NELS mathematics forms and the NLS and HSB cohorts. There were no common items to equate the reading scores in the senior NELS sample to the previous cohorts.

taking a *program* of courses, students are differentiated into some hierarchy within subject-based ability group arrangements, such as honours, regular, or remedial (Oakes et al, 1992; Lucas, 1999; Lucas and Gamoran, 2001). Whether such differentiation results in a program of courses is open to question.

Although there have been changes in tracking over the past decades, several argue that the students' reports of their track placement provide essential data. For example, Gamoran (1987) suggested that because students have a great deal of choice in course selections in high school, students' perceived track placement may be a better predictor of achievement than school reports. Moreover, there is a long body of research that shows that self-reported track placement is one of the strongest and most long-lasting school measures affecting long-term educational attainment (Lucas and Gamoran, 2001; Gamoran and Berends, 1987). Thus, we suggest that student-reported track placement taps an important social-psychological dimension of tracking, revealing students' attitudes towards school and their educational futures. Understanding changes in these perceptions of school opportunity structures over time is important to determine whether students who typically have been underserved by the education system, such as black and Latino students, have changed their social-psychological perceptions over time and whether these changes are related to trends in test score gaps.

#### METHODOLOGY

Methods to assess the effects of individual, family and schools over time need to factor in both changes in the characteristics of interest (means) and changes in the effects of these characteristics (coefficients) on achievement scores at different points in time. To decompose such effects, we rely on a technique widely used in labour economics called the Oaxaca decomposition (Oaxaca, 1970; Cain, 1986; Corcoran and Duncan, 1979). Although attributed to Oaxaca, this technique was previously used by sociologists (Duncan, 1967, 1968; Cancio et al., 1996) and has been primarily used to explain differences in wages across groups in cross-sectional data (Cain, 1986; Corcoran and Duncan, 1979) and the time-series pattern of wages in repeated cross-sections (Sahling and Smith, 1983). There have been recent applications in education as well (Cook and Evans, 2000; Goldhaber, 1996; Gill and Michaels, 1992). For example, as previously noted, Cook and Evans (2000) used such methods to investigate how changes in the mean differences and changes in the coefficients of family and school measures were related to the convergence of the black-white test score gap; our analyses aim to build on their findings using a similar approach.

The first step in decomposing the effects of family background measures on the black-white and Latino-white test score gaps is to estimate a series of regressions for each senior cohort. For these regressions, we first enter the race dummy variable to estimate the unadjusted predicted mathematics test score differences between black and white and Latino and white students. We also estimate a series of multilevel regressions of students nested in schools. These regressions estimate the relationship of mathematics achievement to mother's and father's educational attainment, the

higher of mother's or father's occupational status (Duncan's SEI), the family income quintile dummies, academic track, minority, and socioeconomic composition of the school, sector, and urban locale. Gender is also included in these regressions as a covariate.

To analyze how trends in individual, family, and school measures were related to trends in the black-white and Latino-white mathematics test score gaps, we use multilevel regression. We first fit a hierarchical linear model to each cohort and estimate regression coefficients (Kreft and De Leeuw, 1998; Raudenbush and Bryk, 2002; Snijders and Bosker, 1999). Then, we use the coefficients in the decomposition of the difference between the predicted means of test scores between groups (Equation 1) (e.g., Duncan, 1967, 1968; Oaxaca, 1970; Cain, 1986; Sahling and Smith, 1983; Gill and Michaels, 1992; Cook and Evans, 2000; Goldhaber, 1996; Sayer et al., 2004). The LS data allowed for this analysis over three time intervals, but here we focus on the twenty-year period between 1972 and 1992. By looking at the results of these decompositions, we can begin to understand how black and Latino students' mathematics scores changed relative to those of whites over this 20-year span. Moreover, we can examine in which decade the most notable changes occurred. Mathematically, for each of these intervals we employed the following decomposition:

$$\begin{aligned} \bullet \quad \Delta \hat{y}_1 - \Delta \hat{y}_0 &= (\Delta \bar{x}_1 - \Delta \bar{x}_0) \cdot \hat{\beta}_0 + \Delta \bar{x}_1 \cdot (\hat{\beta}_1 - \hat{\beta}_0) + \bar{x}_{1w} \cdot (\hat{\beta}_{1w} - \hat{\beta}_1) \\ \bullet \quad - \bar{x}_{0w} \cdot (\hat{\beta}_{0w} - \hat{\beta}_0) &+ \bar{x}_{1b} \cdot (\hat{\beta}_1 - \hat{\beta}_{1b}) - \bar{x}_{0b} \cdot (\hat{\beta}_0 - \hat{\beta}_{0b}) \end{aligned} \quad (1)$$

where

$$\bullet \quad \Delta \hat{y}_1 - \Delta \hat{y}_0 = (\hat{y}_{1w} - \hat{y}_{1b}) - (\hat{y}_{0w} - \hat{y}_{0b})$$

is the change from time 0 to time 1 in the difference between the predicted means of white and black (or white and Latino) test scores;<sup>4</sup>

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4 The predicted means used in the decompositions are not simple averages of the dependent variable. Given the nested nature of the data and the consequent need to employ a multi-level or hierarchical model (HLM), the equation above would not necessarily hold if the change in the difference between simple averages  $\Delta \bar{y}_{t1} - \Delta \bar{y}_{t0}$  were placed on the left-hand side since the estimates of  $\beta$  generated under HLM assumptions are not necessarily such that  $\bar{y} = \bar{x} \cdot \hat{\beta}$ . In fact,  $\bar{y} = \bar{x} \cdot \hat{\beta}$  under HLM only if the HLM estimates of  $\beta$  are the same as the OLS estimates of  $\beta$ . Using the HLM estimates of  $\beta$  for our model, the dot product  $\bar{x} \cdot \hat{\beta}$  equals  $\hat{y}$ , i.e. the predicted value of  $y$  given  $\bar{x}$ . Thus, we use  $\hat{y}$  in each of our decompositions so that equality will hold between our manipulations of  $\bar{x} \cdot \hat{\beta}$ . The differences between  $\hat{y}$  and  $\bar{y}$  are slight in all cases.

- $\Delta \bar{x}_i = \bar{x}_{iw} - \bar{x}_{ib}$

is the difference at time  $i$  between the means of black and white (or Latino and white) individual and school-level characteristics;

- $\bar{x}_{ib}$  and  $\bar{x}_{iw}$

are the vectors of means at time  $i$  of individual and school-level characteristics for the black and white (or Latino and white) students, respectively;

- $\hat{\beta}_i$  is the estimated coefficient vector for a representative student at time  $i$ ;
- $\hat{\beta}_{ib}$  and  $\hat{\beta}_{iw}$  are the estimated coefficient vectors at time  $i$  for black and white (or Latino and white) students;
- $(\Delta \bar{x}_1 - \Delta \bar{x}_0) \cdot \hat{\beta}_0$  is the *explained* portion of the achievement differentials, associated with changes from time 0 to time 1 in the differences between white and black seniors (or white and Latino seniors) in the means of family and school characteristics; and
- $\Delta \bar{x}_1 \cdot (\hat{\beta}_1 - \hat{\beta}_0) + \bar{x}_{1w} \cdot (\hat{\beta}_{1w} - \hat{\beta}_1) - \bar{x}_{0w} \cdot (\hat{\beta}_{0w} - \hat{\beta}_0) + \bar{x}_{1b} \cdot (\hat{\beta}_1 - \hat{\beta}_{1b}) - \bar{x}_{0b} \cdot (\hat{\beta}_0 - \hat{\beta}_{0b})$  is the *unexplained* portion of the differentials attributable to variability in the effects (or coefficients) of family and school characteristics between representative students and black or white students (or Latino or white students), as well as differences in these effects from time 0 to time 1.

The explained component of this decomposition has two features of note. First, it weights the change in differences between white and minority student means by the coefficient estimates from time 0 (or 1972). Thus, the explained component represents the change in the test score gap that we would expect to see if the black (or Latino) and white students at time 0 had the mean characteristics of black (or Latino) and white students at time 1 holding everything else constant. The decomposition can also be calculated using estimated coefficients from 1992 as weights, so we show the results from both the 1972 and 1992 estimations. Second, it uses the student cohort coefficient estimates, as opposed to white or black student coefficient estimates. Since black, Latino, and white students in a given cohort were not schooled in total isolation from one another nor indeed from students of other races, they do not form distinct populations but instead are part of the same population. Thus, using a set of coefficient estimates for each student cohort seems more appropriate. This choice also avoids capriciously choosing either to weight the change in mean differences by the black, Latino, or white student coefficient estimates, or estimating a set of coefficients for both and then attempting to mediate between the two sets of results generated. (The results from the regression models and full set of descriptive characteristics appear in Appendix A.)

## RESULTS

Black and Latino students have made considerable achievement gains in the last couple of decades in narrowing the minority-nonminority test score gap. The convergence occurs across subject area tests (Campbell et al., 2000), and the gap has narrowed more in reading than mathematics. In addition, there have been changes in family and school conditions over this time period that are likely to be related to student achievement trends and the achievement gaps between minority and nonminority youth.

In what follows, we first present trends in the black-white and Latino-white mathematics score differences in the senior cohorts and compare them to other national achievement trends in the NAEP. The focus here is on mathematics because we were able to link the test scores across cohorts in the Longitudinal Studies (LS). Second, we examine the trends in family background and school measures for the different groups.

### TEST SCORE DIFFERENCES AMONG RACIAL-ETHNIC GROUPS OVER TIME

Consistent with other national data, black students have made considerable achievement gains in narrowing the black-white test score gap when examining the senior cohorts of NLS-72, HSB-82, and NELS-92. The estimates for the black-white convergence in mathematics appear in Figure 4.3. The estimates for the three LS senior cohorts are plotted against those in the NAEP trend assessment because the NAEP provides the strongest trend assessment available in the United States and offers an important benchmark for the LS cohorts. In 1972, the black-white difference was over a standard deviation ( $SD = 1.09$ ) in the NLS-72 data, but by the early 1990s, the gap narrowed by about 20 per cent to 0.87 of a SD unit difference in NELS. In 1973, the black-white difference in NAEP was 1.14 of a SD, similarly narrowing to 0.89 of a SD in 1996 (a 22 per cent reduction). Both the LS and NAEP data sources reveal that the black-white differences in mathematics converged by roughly  $1/100^{\text{th}}$  of a SD each year between 1972 and 1992. The overall pattern remains consistent, even though the LS and NAEP samples differ in their design and the tests administered. The LS senior cohorts reveal a narrowing of the test score gap between blacks and whites, a convergence that begs explanation.

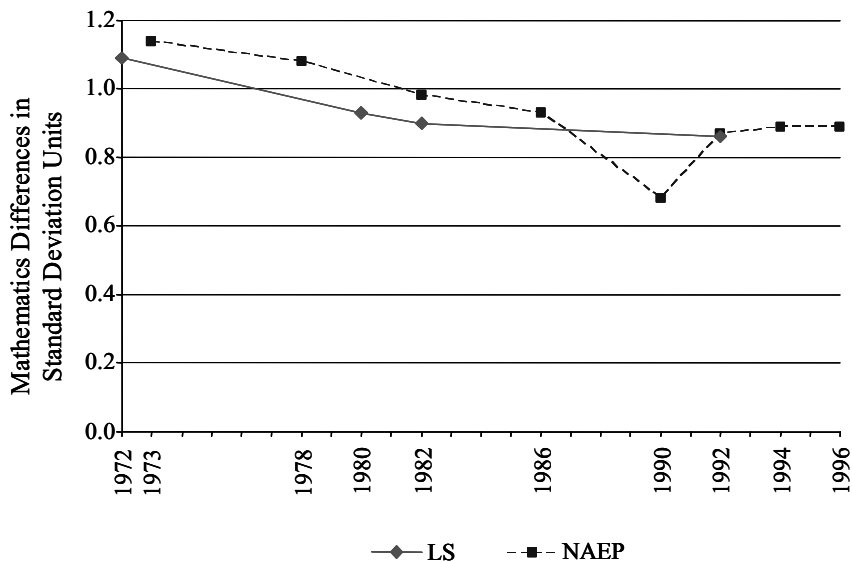


Figure 4.3: Black-White Mathematics Differences in the Senior Cohorts Compared with the NAEP Trend Assessment

Over this same period, Latino students also made achievement gains and closed the gap with white students. Estimates for the Latino-white convergence in mathematics appear in Figure 4.4. The Latino-white gap is large, even though the black-white mathematics achievement gap is even larger. For example, in the NLS-72 data, the Latino-white difference was 0.88 of a SD, but by the early 1990s, the gap had narrowed by 32 per cent — to 0.60 of a SD unit difference in NELS. In 1973, the Latino-white difference in NAEP was 0.94 of a SD, narrowing to 0.71 of a SD in 1996 (a 24 per cent reduction). Similar to the black-white differences, the overall pattern remains consistent between the LS and NAEP samples despite their differences, and the reduction in the test score gaps between Latino and white students is worthy of examination.

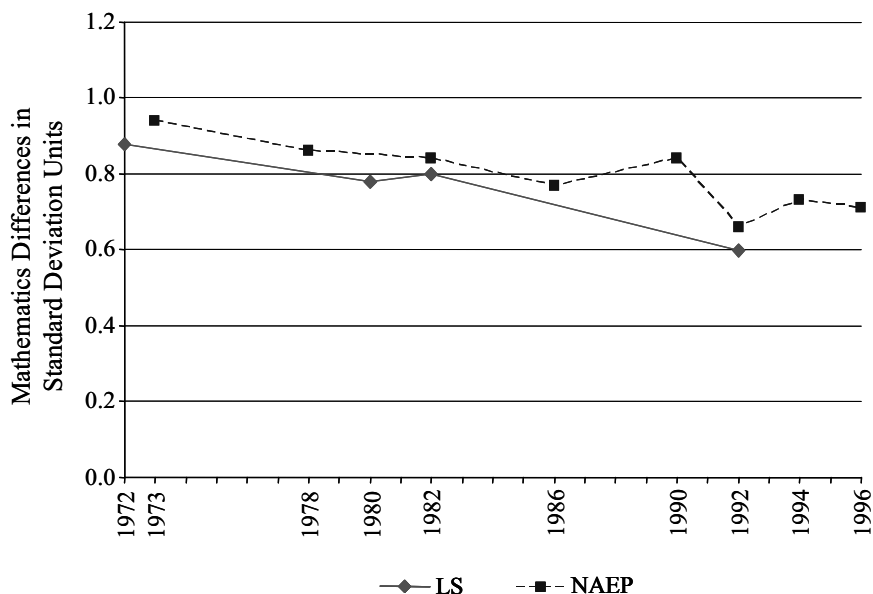


Figure 4.4: Latino-White Mathematics Differences in the Senior Cohorts Compared with the NAEP Trend Assessment

#### CHANGES IN FAMILY BACKGROUND CHARACTERISTICS AMONG RACIAL-ETHNIC GROUPS

In addition to the significant trends in the test scores of black, Latino, and white students, important changes have occurred in family background characteristics such as parents' educational attainment, occupational status, and income.<sup>5</sup> Overall, compared to students' parents in the 1970s, high school seniors in the early 1990s are living with parents who are better educated and have higher occupational status. Family income over this period has remained quite stable (see Grissmer et al., 1994). In 1972, parents' mean educational attainment levels in the LS data were 12.31 years for mothers and 12.54 for fathers (see Table 4.1). By 1992, both mothers and fathers had about one extra year of education – 13.29 years, on average, for mothers, and 13.67 for fathers. Similarly, the occupational status of parents increased. In 1972, the Duncan SEI index was 36.93, whereas in 1992 this had increased to 47.19 — a 10.26 point increase (or a 0.38 of a standard deviation [SD] increase).

<sup>5</sup> The descriptive statistics and statistical models use the appropriate weights available in the data and adjust for the clustered nature of the data.



## BLACK-WHITE FAMILY BACKGROUND TRENDS

When examining black-white differences in family background trends over time, there have been important improvements in these conditions for black students. Black students made considerable progress relative to whites when considering fathers' educational attainment, parent occupational status, and family income. As the shaded rows in Table 4.1 reveal, the black-white difference in 1972 for the educational attainment levels of students' fathers was almost one year (0.88) of education. Specifically, the average black student's father had .88 years less than the average white student's father in 1972, but by 1992 this education gap had narrowed to about a half a year (0.54). The black-white gap in occupational status in 1972 was 19.83 points (or 0.74 of a SD). By 1992, the gap in occupational status had decreased to 8.95 points (or 0.34 of a SD). The percentage of black students living in poor families also decreased dramatically between 1972 and 1992. In 1972, the proportion of black students living in poor families was 0.61 compared with 0.30 of white students — a 0.31 difference.<sup>6</sup> In 1992, the proportion of black students living in poverty was 0.41 compared with 0.19 of white students — a 0.22 difference. Of course, the proportion of black students who still live in poverty is significant, but the progress of blacks relative to whites is noteworthy.

*Latino-White Family Background Trends*

When examining differences between Latino and white students in family background measures between the early 1970s and 1990s, we find that overall conditions have improved for Latino students and their families. However, despite these overall positive trends, they have not helped Latino students and their families close the gap with white students on the family background measures examined here.

For example, Latino students' mothers had an average 11.04 years of schooling in 1972, but by 1992, the average mother's educational attainment for Latino students was 12.03 — nearly a year's increase. A similar pattern emerges when considering father's educational attainment for Latino students. Despite these positive trends in parental educational attainment, however, this progress has not closed the gap between Latino and white students. For instance, in 1972 the gap between Latino and white students in mother's educational attainment was 1.41 in 1972 and this gap actually increased slightly by 1992 to 1.47 years. That is, in the early 1990s, Latino students had mothers who, on average, had just under one and a half years of education less than white students' parents. The Latino-white

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6 Thirty-four, 29 and 25 per cent of the students are in the lowest quintiles in the respective 1972, 1982, and 1992 cohorts. The reason there are more than 20 per cent of the students in these quintiles is that we parsed each cohort's income values in 1992 dollars into five categories (5 quintiles) by assigning the income category midpoints to the responses and then found the corresponding quintiles from the population as reported by the Census Bureau (see Koretz and Berends, 2001). Thus, the senior cohorts are somewhat poorer than the nation as a whole when measured in this way.

difference in fathers' educational attainments was 1.21 in 1972, and this gap increased to 1.59 in 1992. In general, while the educational attainment of Latino students' parents increased between the early 1970s and early 1990s, these increases were not sufficient to close the gap with white students.

*Table 4.1: Selected Racial-Ethnic Differences in Family Background Characteristics in LS Data, 1972-1992*

	1972	1982	1992	Change (1992-1972)
Mother's Education	12.31	12.65	13.29	+0.98
<i>White</i>	12.45	12.84	13.50	+1.05
<i>Blacks</i>	11.57	12.22	12.96	+1.39
<i>Latino</i>	11.04	11.90	12.03	+0.99
<i>B-W Difference</i>	-0.88	-0.62	-0.54	+0.34
<i>L-W Difference</i>	-1.41	-0.94	-1.47	-0.06
Father's Education	12.54	12.88	13.67	+1.13
<i>White</i>	12.73	13.19	13.92	+1.19
<i>Blacks</i>	11.27	11.76	12.96	+1.69
<i>Latino</i>	11.32	11.98	12.33	+1.01
<i>B-W Difference</i>	-1.46	-1.43	-0.96	+0.50
<i>L-W Difference</i>	-1.21	-1.41	-1.59	-0.18
Occupational Status (Duncan's SEI)	36.93	47.79	47.19	+10.26
<i>White</i>	39.55	50.64	49.58	+10.03
<i>Blacks</i>	19.72	38.47	40.63	+20.91
<i>Latino</i>	21.70	39.98	36.73	+15.03
<i>B-W Difference</i>	-19.83	-12.17	-8.95	+10.88
<i>L-W Difference</i>	-17.85	-10.66	-12.85	+5.00
Lowest Income Quintile	0.34	0.29	0.25	-0.09
<i>White</i>	0.30	0.24	0.19	-0.11
<i>Blacks</i>	0.61	0.51	0.41	-0.20
<i>Latino</i>	0.57	0.38	0.49	-0.08
<i>B-W Difference</i>	0.31	0.27	0.22	-0.09
<i>L-W Difference</i>	0.27	0.14	0.30	0.03

When considering occupational status, the gap between Latino and white students decreased over the period examined. The gap in 1972 was 17.85 Duncan SEI points (or 0.67 of a SD), and this gap decreased to 12.85 points in 1992 (0.48 SD units). In general, the gap in occupational status closed by just under one-fifth of a standard deviation over this twenty-year period.

In 1972, the proportion of Latino students in the bottom income quintile was .57 compared with 0.30 of white students, a 0.27 difference. Twenty years later, 0.49 of Latino students were in the bottom income quintile compared with 0.19 of white students — a .30 difference. The gaps in poverty between students in Latino and white families were and remain equally large.

## CHANGES IN SCHOOL CHARACTERISTICS AMONG RACIAL-ETHNIC GROUPS

Examining changes in school characteristics in the data sets spanning 1972 to 1992, we see that there have been increases in the proportion of students across the nation attending urban schools, schools with a greater number of minority students and private schools. Table 4.2 shows the differences in school conditions between 1972 and 1992 for the entire samples in the data sets as well as by racial-ethnic groups.

There have been increases in the proportion of students attending urban schools and schools with a greater proportion of racial-ethnic minorities. For example, in 1972, 28 per cent of the nation's students attended schools in urban areas compared with 36 per cent of students in 1992. In addition, although overall students in 1972 attended schools in which the proportion of the non-white student body was 0.19, in 1992 students, on average, attended schools in which the non-white proportion was 0.36.

Similar to changes in students' families, schools tended to be somewhat higher in occupational status in 1992 compared with 1972. That is, in 1972 students attended schools where the average socioeconomic composition was (-0.05) compared with the 1992 counterparts who typically attended schools where the average socioeconomic composition was (0.05).

Students in 1992 were also more likely to attend private schools than students in 1972, at least as evident in these data sets. Whereas the proportion of students attending private schools in the NLS-72 was 0.07, the proportion of high school seniors in NELS attending private schools was 0.16.

### *Black-White Differences in School Characteristics*

When considering the types of schools that black and white students attended between 1972 and 1992, there have been some differences that have remained over time. In 1972, black students were likely to attend schools for which the average proportion of schools classified as urban was 0.44 compared with white students who attended schools for which the average proportion was 0.27. There were slight changes in the proportion of white and black students attending urban schools between 1972 and 1992, and the gap between blacks and whites decreased to a small extent from 0.17 in 1972 to 0.14 in 1992.

When considering the socioeconomic composition of schools, the black-white difference in the typical schools attended by blacks and whites narrowed between 1972 (-0.18 difference) and 1982 (-0.08); however the black-white difference in the average socioeconomic composition of schools was quite similar in 1992 (a gap of -0.21) to the gap 20 years earlier. Apparently, the closing of black-white socioeconomic circumstances seen among individuals was not reflected in the socioeconomic composition of schools that blacks and whites attended.

If a high minority composition is viewed as a proxy for schools that have historically been underserved by the education system in terms of providing high quality resources, services, and instruction, then the increasing proportion of high

minority schools suggests a lack of progress for black students. The average proportion minority composition for schools attended by white students was 0.17 compared with the average for schools attended by black students of 0.36. While there were not significant changes in minority composition for schools attended by whites between 1972 and 1992, the average minority composition for schools attended by black students increased from 0.36 to 0.42, a 0.06 point change in proportion. Comparing minority composition in the typical schools between 1972 and 1992, there was actually an increase of the difference between blacks and whites (0.19 to 0.24).

When comparing the proportion of black and white students attending private schools, we find that while there has been an increase in private school attendance in both groups, the gap in private school attendance has grown slightly. For example, in 1972, the proportion of white students attending private schools was 0.07 compared with 0.05 of black students. By 1992, the proportion of white students attending private schools was 0.17 compared with 0.11 of black students. The black-white gap in private school attendance was -0.02 in 1972 compared with -0.06 in 1992 — suggesting that whites tend to attend private schools more than black students, and that this gap has increased by a very small amount over time.

#### *Latino-White Differences in School Characteristics*

Turning now to the type of schools that Latino and white students attended from 1972 through to 1992, we see some indicators of change and stability that may be related to changes in test score trends. There has been stability in the proportion of Latino students attending urban schools and in the socioeconomic composition of the schools they attended. There have been very small increases in the Latino population attending private schools and schools with a higher percentage of minority students.

In 1972, the proportion of Latino students attending urban schools was 0.48 compared with 0.27 of white students — a 0.21 difference. By 1992 there were slight increases in the proportion of white students attending urban schools and small decreases in the proportion of Latino students attending such schools, so the Latino-white gap decreased from 0.21 in 1972 to 0.15 in 1992.

When considering the socioeconomic composition of schools, the Latino-white difference actually increased over time, favouring white students. In 1972 the average socioeconomic composition of schools attended by whites was -0.03, but this improved to 0.13 in 1992. By contrast, the average socioeconomic composition of schools attended by Latino students in 1972 was -0.12 and this got worse in 1992 (-0.15). Thus, the Latino-white gap in school socioeconomic composition actually got worse for Latino students between 1972 and 1992.

Again, if a high minority composition is viewed as a proxy for schools that have historically been underserved by the education system in terms of providing high quality resources, services, and instruction, then these conditions have not benefited Latino students. For example, in 1972 the average minority composition for schools attended by Latino students was 0.33 compared with 0.17 for white students. The

Latino-white gap in minority composition increased slightly from 0.16 in 1972 to 0.19 in 1992, suggesting changes in minority composition are unlikely to benefit Latino students.

Table 4.2: Racial-Ethnic Differences in School Conditions in LS Data, 1972-1992

	1972	1982	1992	Change (1992-1972)
Proportion Urban School	0.28	0.25	0.36	+0.08
<i>White</i>	0.27	0.21	0.30	+0.03
<i>Blacks</i>	0.44	0.36	0.44	0.00
<i>Latino</i>	0.48	0.26	0.45	-0.03
<i>B-W Difference</i>	+0.17	+0.15	+0.14	-0.03
<i>L-W Difference</i>	0.21	0.05	0.15	-0.06
Proportion Minority Composition	0.19	0.26	0.25	+0.06
<i>White</i>	0.17	0.21	0.18	+0.01
<i>Black</i>	0.36	0.37	0.42	+0.06
<i>Latino</i>	0.33	0.28	0.37	+0.04
<i>B-W Difference</i>	+0.19	+0.16	+0.24	+0.05
<i>L-W Difference</i>	+0.16	+0.07	+0.19	+0.03
Mean Socioeconomic Composition	-0.05	0.00	0.05	+0.10
<i>White</i>	-0.03	0.04	0.13	+0.16
<i>Black</i>	-0.21	-0.04	-0.08	+0.13
<i>Latino</i>	-0.12	-0.06	-0.15	-0.03
<i>B-W Difference</i>	-0.18	-0.08	-0.21	-0.03
<i>L-W Difference</i>	-0.09	-0.10	-0.28	-0.19
Proportion Private School	0.07	0.12	0.16	+0.09
<i>White</i>	0.07	0.12	0.17	+0.10
<i>Black</i>	0.05	0.10	0.11	+0.06
<i>Latino</i>	0.06	0.10	0.12	+0.06
<i>B-W Difference</i>	-0.02	-0.02	-0.06	-0.04
<i>L-W Difference</i>	-0.01	-0.02	-0.05	-0.04

Similar to the black-white gap in private school attendance, we find that the Latino-white gap in private school attendance has increased to a small extent. For example, in 1972, the proportion of white students attending private schools was 0.07 compared with 0.06 of Latino students. By 1992, the proportion of white students attending private schools was 0.17 compared with 0.12 of Latino students. The Latino-white gap in private school attendance was -0.01 in 1972 compared with -0.05 in 1992. These differences suggest that white students tend to attend private schools more than Latino students. This gap has increased over time to a small degree.

## CHANGES IN SELF-REPORTED TRACK PLACEMENT AMONG RACIAL-ETHNIC GROUPS

The school organisation characteristics described above are important because they have been related to student achievement, and because any changes over time for one racial-ethnic group vis-à-vis another may suggest growing or declining inequities. Although school characteristics help describe elements of the organisation, it is also important to consider schooling characteristics such as track placement, since these provide indicators of student experiences within the organisation (Bidwell and Kasarda, 1980; Gamoran et al, 2000).

When considering track placement for the different national cohorts of high school seniors, we see relative stability in proportions of students reporting placement in the academic track. For example, in 1972 the proportion of students reporting academic track placement was 0.47. This decreased slightly in the early 1980s when the proportion of students reporting academic track placement was 0.39. But by 1992, the proportion once again increased to 0.47.

### *Black-White Differences in Self-Reported Academic Track Placement*

When looking at black-white differences in track placement, we see a significant increase in the proportion of black students reporting academic track placement, suggesting a closing of the black-white tracking gap. In 1972, the proportion of black students reporting academic track placement was 0.28, whereas in 1992, the proportion was 0.41, a 0.13 point increase. About half of all white students in 1972 and 1992 reported academic track placement. Although the black-white difference in reported track placement was 0.22 in 1972, this difference declined to 0.08 in 1992 — a significant reduction suggesting a possible benefit for black students.

### *Latino-White Differences in Self-Reported Academic Track Placement*

When examining the Latino-white differences in track placement, there was also a reduction in the gap. In 1972, the proportion of Latino students reporting academic track placement was 0.26 compared with 0.37 in 1992 — a 0.11 point increase. The Latino-white difference in reported track placement was 0.24 in 1972, and this difference was reduced to 0.12 in 1992. This decline in the gap, while not as great as the decline in the black-white gap, suggests changes in tracking that benefited Latino students.

Table 4.3: Racial-Ethnic Differences in Self-Reported Track Placement in LS Data, 1972-1992

	1972	1982	1992	Change (1992-1972)
<i>Academic Tracks</i>	0.47	0.39	0.47	0.00
<i>White</i>	0.50	0.42	0.49	-0.01
<i>Blacks</i>	0.28	0.35	0.41	+0.13
<i>Latino</i>	0.26	0.25	0.37	+0.11
<i>B-W Difference</i>	-0.22	-0.07	-0.08	+0.14
<i>L-W Difference</i>	-0.24	-0.17	-0.12	+0.12

With few exceptions, the patterns spanning the early 1970s to the early 1990s show a narrowing of the black-white and Latino-white differences in mathematics achievement. In both the LS senior cohorts and NAEP data, we see a significant reduction between 1972 and 1992 in the black-white (from a 1.09 to a 0.87 standard deviation units' difference or a 20 per cent reduction) and Latino-white (from a 0.88 to a 0.60 standard deviation units' difference or a 32 per cent reduction) mathematics test score gaps. While the gaps remain large, the significant convergence in scores requires some explanation, something we will now consider.

Many of the measures for family background trends suggest that the family conditions of black students — at least on the measures considered here — have improved vis-à-vis those of white students. Some of the trends in family background measures benefited Latinos (i.e., socioeconomic status), but several have not (e.g., parent education and income).

It is less clear that school organisation characteristics reveal a closing of the black-white or Latino-white gap. In one instance, that of urban school attendance, there has been a narrowing of the gaps between black and white and Latino and white students. However, when considering school minority or socioeconomic composition or private school attendance, there have not been significant changes in the racial-ethnic group differences.

Changes in schooling characteristics, however, when measured by self-reported track placement, suggest important improvements in the schooling experiences of black and Latino students vis-à-vis their white counterparts. A greater proportion of black and Latino students reported academic track placement in 1992 compared with 1982 and 1972. The black-white and Latino-white gaps in this regard have closed dramatically.

But what are the relationships among these trends? How do the changes in the family background and school measures relate to black-white and to Latino-white test score trends? By decomposing the effects of these measures on mathematics achievement, we can provide some answers to these questions — something we turn to next.

## DECOMPOSING CHANGES IN THE BLACK-WHITE TEST SCORE GAP

The methods we use allow us to disentangle the changes that have occurred for black and white students (and later for Latino and white students). We examine the changes between 1972 and 1992 in levels (means) of the individual, family background, and school measures. When these changes are scaled by the 1972 regression coefficients, we are able to examine how family and school changes corresponded to the changes that occurred in the test score gap between black and white students and between Latino and white students. In other words, assuming that the 1972 relationships between family and school measures and mathematics achievement remained constant for later senior cohorts, we examine how changes in population characteristics corresponded to changes in the mathematics achievement gap over this 20-year period. When presenting the results, we focus on changes in the population (i.e., family and school) and then on the changes in student reports about secondary school tracking. The results of this decomposition for mathematics achievement scores appear in Table 4.4. The column of  $\Delta$ s in Table 4.4 is the change in the black-white test score gap for the time period considered that is associated with the changes in the means for the variable (rows) being considered. The per cent column (per cent) is the percentage of the total black-white test score gap for the period being considered to which changes in that particular variable correspond; positive percentages indicate that the predicted test score gaps would have decreased or converged, while negative percentages indicate that test score gaps would have increased or diverged.

Between 1972 and 1992, relative to white students, black students' individual and family characteristics — parental education level, family income, and particularly parent occupational status — improved. These changes were large and when scaled by the 1972 regression coefficients, these relative changes between the black and white student populations corresponded to 56.65 per cent of the change in the test score gap. Of particular importance was the relative improvement of the socioeconomic circumstances of black families compared to white families as seen by changes in the SEI measure corresponding to 43.22 per cent of the convergence in the mathematics scores between black and white students.

If one only considers changes in the mean school variables measured here when scaled to the 1972 regression coefficients, there was a corresponding increase in the black-white test score gap between 1972 and 1992. The increases in black students' likelihood of being segregated in high minority schools corresponded to a 10.34 increase of the black-white mathematics gap. Overall, changes in school level means corresponded to a 12.16 per cent increase in the black-white gap.



Table 4.4: Decomposition of the Relationships of Family Background, Track and School Measures to the Convergence in Black-White Mathematics Scores, 1972-1992

	Black - White							
	1972-1982		1982-1992		1972-1992		1992	
	$\Delta$	%	$\Delta$	%	$\Delta$	%	$\Delta$	%
<i>Individual and Family Measures Total</i>	-0.086	30.86	-0.045	-89.77	-0.128	56.65	0.133	18.55
<i>Female</i>	-0.010	3.47	0.001	2.95	-0.007	2.91	0.004	0.50
<i>Family Income</i>	-0.007	2.48	-0.005	-10.59	-0.012	5.22	0.047	6.63
<i>Parental Education</i>	0.014	-5.26	-0.028	-55.29	-0.012	5.30	0.058	8.11
<i>Occupational Status</i>	-0.083	30.17	-0.013	-26.84	-0.097	43.22	0.024	3.31
<i>School Measures Total</i>	-0.024	8.72	0.067	134.19	0.027	-12.16	0.106	14.77
<i>School Mean SES</i>	-0.007	2.54	0.017	34.32	0.002	-0.93	0.021	2.98
<i>School Percent Minority</i>	-0.020	7.31	0.050	100.00	0.023	-10.34	0.093	12.97
<i>Private School</i>	0.000	0.05	0.000	0.97	0.001	-0.51	-	-0.57
<i>Suburban School</i>	0.005	-1.90	0.000	-0.48	0.004	-1.90	0.000	-0.07
<i>Urban School</i>	-0.002	0.72	0.000	-0.62	-0.003	1.53	-	-0.54
<i>Academic Track</i>	-0.138	50.33	0.004	8.80	-0.133	59.28	0.054	7.51
<i>Total</i>	-0.247	89.92	0.027	53.22	-0.233	103.78	0.292	40.83
<i>Unexplained</i>	-0.028	10.08	0.023	46.78	0.008	-3.78	0.423	59.17
<i>Total Change</i>	-0.275		0.050		-0.225		0.715	

One of the most important measures that corresponded with a decrease of the mathematics test score gap between white and black students was the change in the schooling experiences of black students as measured by self-reported academic track placement. As noted earlier, the gap between blacks and whites enrolled in the college track was -0.22 in 1972 and -0.08 in 1992. These differences indicate that while white students tended to report academic track placement more than black students, these differences decreased significantly between 1972 and 1992. In Table 4.4, when this change is scaled to the 1972 regression coefficients, these changes in reported track placement between black and white students corresponded to a 59.28 per cent change in the mathematics score gap. Compared with black students in 1972, those in 1982 were more likely to report academic track placement, which resulted in a closing of the gap with white students. These relative changes in reported academic track placement corresponded to 50.33 per cent of the convergence in the mathematics scores between black and white students. The relationship between track placement and the convergence of mathematics scores between black and white students remained relatively stable between 1982 and 1992, but here too, the increase in academic track enrolment for black students compared with their white counterparts was associated with 8.80 per cent of the test score convergence between 1982 and 1992.

#### *Decomposing the Black-White Test Score Gap in 1992*

Despite the associations between the convergence in mathematics scores and the changes in individual, family, and school measures that occurred between the different senior cohorts, substantial differences in mathematics scores remain between blacks and whites.

To examine what factors are related to the persistence of inequality in test scores between blacks and whites, we used our second decomposition to estimate the extent to which the variables measured here were associated with the black-white test score gap in 1992. The results for this decomposition appear in the final two columns of Table 4.4.

Important factors that were related to the 1992 test score differences include students' socioeconomic background, minority school composition, and track placement. Overall, the measures we consider corresponded to 40.83 per cent of the difference in mathematics scores between black and white students. Considered separately, black-white differences in individual and family measures corresponded to an 18.55 per cent decrease in the 1992 black-white mathematics gap. Parent education, income and parental SEI corresponded to about 8, 7 and 3 per cent of the decrease in the black-white mathematics gap in 1992, respectively.

In total, black-white differences in the school level measures corresponded to about a 15 per cent decrease in the black-white mathematics gap in 1992. Of particular importance was the minority composition of the school. Differences in attending schools of varying minority composition corresponded to about a 13 per cent decrease in the black-white mathematics gap in 1992. This is particularly relevant because black students in these 1992 data attended schools where 42 per

cent of the student body was minority compared with white students who attended schools where 18 per cent of the students were minority. Accounting for these disparities in school composition is important in examining relationships with the continuing inequalities in black-white test score differences.

As in the cross-cohort decompositions, academic track revealed important relationships to black-white test score differences. In the decomposition for the 1992 cohort, black-white differences in academic track placement corresponded to a 7.51 per cent decrease of the mathematics score gap.

#### DECOMPOSING CHANGES IN THE LATINO-WHITE TEST SCORE GAP

Turning now to the decomposition of mathematics test score differences between Latino and white students, a different story emerges, and the results of this decomposition appear in Table 4.5. Our results reveal that the improved social conditions of Latino students during the 1972-1982 time frame corresponded to the convergence in mathematics scores with white students over this ten-year period. However, the family and school conditions of Latino students did not continue to converge with white students between 1982 and 1992, which corresponded to an increase in the Latino-white mathematics gap over this later period.

Over the twenty-year period between 1972 and 1992, changes in the family measures for Latino students were mixed. As we discussed previously, for some family measures, Latino students did not improve their circumstances relative to white students. If we scale these differences by the 1972 regression coefficients we find that changes in parent education and family income correspond to increases, not decreases, in the mathematics test score gap of 12.13 per cent and 2.54 per cent, respectively. For parent occupational status, Latinos did improve relative to whites between 1972 and 1992, and this change corresponded to a 13.15 decrease in the mathematics gap. Overall, changes in individual and family measures scaled to the 1972 regression coefficients corresponded to a 0.58 per cent increase in the Latino-white mathematics score gap.

Turning to changes in school measures for Latino and white students between 1972 and 1992, we found that these changes corresponded to an overall increase in the Latino-white mathematics gap of 8.17 percent. Between 1972 and 1992, changes in school socioeconomic status corresponded to a 3.97 per cent increase in the mathematics score differences between Latino and white students, and changes in school per cent minority composition were accompanied by a 4.77 per cent increase in the gap.

Similar to what we found for black students, a critical change that improved the circumstances of Latino students relative to their white counterparts was the relative increase in Latinos reporting academic track placement. Previously, we noted that the gap between Latino and white students reporting academic track enrolment was -0.24 in 1972 and -0.12 in 1992, indicating that although white students tend to report academic track placement more than Latino students, these differences decreased significantly during this twenty-year period. When scaled to the 1972 regression coefficients, the increase of Latino students reporting academic track

placement corresponded to a 34.07 per cent decrease in the gap in Latino-white mathematics scores between 1972 and 1992.

*Table 4.5: Decomposition of the Relationships of Family Background, Track and School Measures to the Convergence in Latino-White Mathematics Scores, 1972-1992.*

	Latino - White							
	1972-1982		1982-1992		1972-1992		1992	
	$\Lambda$	%	$\Lambda$	%	$\Lambda$	%	$\Lambda$	%
Individual and Family Measures Total	-0.107	134.28	0.086	-31.36	0.003	-0.58	0.195	42.39
Female	-0.018	22.28	0.007	-2.59	-0.003	0.94	0.000	-0.04
Family Income	-0.021	25.91	0.030	-10.85	0.009	-2.54	0.057	12.33
Parental Education	-0.004	5.30	0.039	-14.34	0.043	-12.13	0.104	22.69
Occupational Status	-0.064	80.79	0.010	-3.58	-0.046	13.15	0.034	7.41
School Measures Total	-0.056	70.63	0.099	-36.29	0.029	-8.17	0.094	20.45
School mean SES	0.001	-0.95	0.025	-9.19	0.014	-3.97	0.029	6.19
School per cent minority	-0.045	57.10	0.072	-26.34	0.017	-4.77	0.074	16.03
Private school	0.000	-0.30	0.000	-0.14	0.001	-0.35	-0.004	-0.76
Suburban school	0.005	-6.89	-0.001	0.26	0.003	-0.77	0.000	-0.09
Urban school	-0.017	21.66	0.002	-0.88	-0.006	1.69	-0.004	-0.92
Academic Track	-0.068	85.33	-0.045	16.49	-0.120	34.07	0.077	16.77
Total	-0.231	290.24	0.140	-51.17	-0.089	25.32	0.367	79.60
Unexplained	0.151	-190.24	-0.413	151.17	-0.263	74.68	0.094	20.40
Total Change	-0.079		-0.273		-0.352		0.461	

*Decomposing the Latino-White Test Score Gap in 1992*

As we did for black students, in the 1992 data we explored the extent to which Latino-white differences in family and school measures were associated with the mathematics score differences between Latino and white students.

Important factors that were related to Latino-white mathematics test score differences in 1992 were parent education, parent occupational status, family income, minority and socioeconomic school composition and track placement. When considered together, Latino-white differences in individual, family and school measures corresponded to a 79.60 per cent decrease of 1992 mathematics gap.

Considered separately, differences in individual and family measures between Latinos and whites corresponded to a 42.39 per cent decrease of the Latino-white mathematics gap in 1992. Of particular importance are differences between Latinos and whites in terms of parent education levels. These parent education differences corresponded to a 22.69 per cent decrease of the 1992 mathematics gap. Latino-white disparities in family income and parent occupational status corresponded to a decrease in the Latino-white mathematics gap of 12.33 and 7.41 percent, respectively.

Differences between Latino and white students in terms of the school measures corresponded to a 20.45 per cent decrease of the 1992 mathematics gap. The school composition measures (socioeconomic status and per cent minority) were particularly important. Differences between Latino and white students in terms of the minority school composition corresponded to a 16 per cent decrease of the Latino-white mathematics gap in 1992, and differences in school socioeconomic composition corresponded to a 6 per cent decrease of the 1992 gap. Similar to what we found for black-white test score differences, these findings are relevant because Latino high school seniors in 1992 attended schools in which on average 37 per cent of the student body was minority compared with white students who attended schools where on average 18 per cent of the students were minority. Accounting for these disparities in school composition (viewed as a proxy for schools that have historically be underserved by the education system) is important when examining continuing inequalities in Latino-white test score differences.

Finally, Latino-white differences in self-reported academic track placement corresponded to a 16.77 per cent decrease of the 1992 mathematics gap. This finding about the relevance of track placement is consistent with what we found in the cross-cohort decompositions, which suggested that changes in academic track placement between 1972 and 1992 corresponded to meaningful decreases in the Latino-white test score gap over this 20-year period.

## DISCUSSION

Our analyses examined several family and school factors related to black-white and Latino-white test score differences in mathematics. We set out to build on past research by analyzing nationally representative data between the early 1970s and early 1990s to address questions related to mathematics score trends among blacks,

Latinos and whites: how selected family and school measures changed during this time, and the correspondence of changes in these measures to black-white and Latino-white test score gaps. Here, we summarise our findings based on these research questions and discuss the policy implications that arise from our empirical analyses, but before doing so, we discuss the limitations of our analysis to provide a context in which to interpret the results and their implications.

### *Changes in Mathematics Score Gaps Among Blacks, Latinos and Whites*

Data from the NAEP reveal that high school students in the United States today are scoring about the same in 1999 as they were in the early 1970s in mathematics and reading. These overall trends mask significant progress made among certain groups. For instance, over the past thirty years, when compared with their white counterparts, black and Latino students made substantial progress towards closing the test score gap in both mathematics and reading.

Consistent with these national trends, we found that black and Latino students have made considerable achievement gains in narrowing the black-white and Latino-white test score gap when examining the senior cohorts of NLS-72, HSB-82 and NELS-92. The black-white difference was over a standard deviation in 1972, and this gap had narrowed by about 20 per cent by 1992. Both the data we analyze here and the NAEP reveal that the black-white differences in mathematics converged by roughly 1/100<sup>th</sup> of a standard deviation each year between the early 1970s and early 1990s. Black and white students' mathematics scores did converge more between the early 1970s and 1980s compared with the convergence occurring between the early 1980s and early 1990s. Over this twenty-year period, the Latino-white gap in mathematics also converged. In 1972, the Latino-white mathematics gap was nearly 9/10ths of a standard deviation, but by 1992, the gap had narrowed by about one-third to 6/10ths of a standard deviation. Latino and white students' scores converged more between 1982 and 1992 than they did between 1972 and 1982.

These overall patterns remain consistent, even though the data for the senior cohorts we analyzed and the NAEP data differ in their design and specific mathematics test items. Because the 1972, 1982, and 1992 senior cohorts reveal a significant narrowing of the test score gaps between blacks and whites and between Latinos and whites, our analysis focused a great deal on how changes in family and school factors contributed to the convergence of these mathematics score gaps.

### CHANGES IN FAMILIES AND TEST SCORE GAPS IN MATHEMATICS

When examining the relationships between family background measures and test score gaps among blacks, Latinos, and whites, researchers frequently analyze cross-sectional or panel data for a particular cohort of students to explain the percentage of the gap with family or other social indicators (see Berends et al., 1999; Jencks and Phillips, 1998; Phillips et al., 1998; Hedges and Nowell, 1998, 1999; Brooks-Gunn et al., 1996; Grissmer et al., 1994). In such analyses, family background explains

about 25-30 per cent of the cross-sectional black-white gap in scores for a particular cohort (see Hedges and Nowell, 1998, 1999).

To further disentangle the relationships between family background and student achievement gaps, our analysis looks at the changes *across cohorts* in the levels of the background measures themselves and scaled these relationships to the 1972 regression coefficients. For different senior cohorts between 1972 and 1992, our analyses reveal that the improved socioeconomic conditions of black students – such as parents' occupational status, educational attainments, and income – corresponded to a significant amount of convergence in black-white test scores. Changes in the family background measures we analyzed corresponded to a 54 per cent decrease in the black-white mathematics gap between 1972 and 1992.

For these same cohorts, our findings show that the improved socioeconomic conditions of Latino students during the 1972-1982 timeframe were consistent with the convergence in mathematics scores with white students over this ten-year period. However, the family and school conditions of Latino students did not improve relative to white students between 1982 and 1992 as revealed in the data sets, which corresponded to an increase in the Latino-white mathematics gap for this later period.

Generally between 1972 and 1992, Latinos did not improve their circumstances across family measures as did black students. For example, while Latino students did improve in terms of parent occupational status, they did not close the gap with whites when considering parental education and family income. Black students did close the gaps with whites on these family measures. The changes in the black-white and Latino-white test score gaps corresponded to the extent and comprehensiveness of these family changes for Latino and black students relative to white students.

## CHANGES IN SCHOOLS AND TEST SCORE GAPS IN MATHEMATICS

Despite some of the positive changes in family circumstances for black and Latino students, the changes that occurred *between* schools corresponded to an increase in the black-white and Latino-white mathematics test score gaps between 1972 and 1992. In our analyses, compared with white students, black and Latino students were more likely to attend higher minority schools in 1992 than 1972, and these changes corresponded to increasing the black-white and Latino-white mathematics achievement gaps over this 20-year period. Several other authors have commented on the increasing segregation of minority students in recent years (Orfield and Yun, 1999; Orfield, 2001). The effects of desegregation were most dramatic in changing the racial-ethnic composition of schools during the 1960s and 1970s (Grissmer, Flanagan, and Williamson, 1998; Armor, 1995), so our analyses may have missed the most dramatic positive effects of these changes. Yet, changes in composition do not immediately result in changes in school activities and culture that are beneficial to black students. As Grissmer et al. (1998) showed, black seniors who were tested in the early 1970s entered school in the early 1960s, a time when 60 per cent of the black population was educated in schools in which more than 90 per cent of the students were from minority backgrounds. Because of the dramatic desegregation in

schools that occurred between 1968 and 1972 (especially in the South), students who entered school in the early 1970s were the first to experience a schooling career from K-12 in less segregated schooling circumstances. These are the students that would be taking tests as seniors in the mid 1980s. Yet, as our analyses suggest, changes in the minority composition of high schools did not correspond to a decrease in the black-white and Latino-white achievement gaps. Rather, our analyses reveal that the increases in the minority composition of high schools that black (and Latino) students attended between 1972 and 1992 corresponded to an increase in the test score gaps.

Compared with these *between*-school changes, there were positive changes in the *within*-school experiences of black and Latino students compared with whites over the twenty-year period. Increased enrolments of black and Latino students in the academic track (based on student self-reports) corresponded to a 60 per cent decrease in the black-white mathematics gap between 1972 and 1992 and to a 34 per cent decrease in the Latino-white gap. Such changes in the perceptions of track placement may reflect changes in the structure of tracking (curricular differentiation) and/or in the social-psychological conditions (perceptions) underlying track placement (Lucas, 1999). Such significant changes in black and Latino students' learning opportunities and their perceptions of them are consistent with changes in the organisation of tracking that occurred over this time. And while our analyses may overestimate the effect of tracking because we rely on the overall coefficient from the 1972 cohort, the self-reported track placement measure continues to have significant associations with mathematics achievement across cohorts and racial groups in later periods. Certainly, further understanding of the changes and trends in the racial diversity of schools, academic tracking, and achievement is warranted (see Caldas and Bankston, 1998; Lucas and Berends, 2002).

#### PERSISTANT INEQUALITY IN THE MATHEMATICS TEST SCORE GAPS

Our analysis reveals a mixed picture of the progress of black and Latino students relative to whites. On the one hand, individual, family, and some school circumstances have changed across cohorts, and this corresponds to the decrease of the black-white mathematics score gap that occurred between 1972 and 1992. For Latinos, our results reveal that the improved social conditions of Latino students during the 1972-1982 time frame corresponded to the convergence in mathematics scores with white students over this ten-year period. However, the family and school conditions of Latino students did not continue to converge with white students between 1982 and 1992, which corresponded to an increase in the Latino-white mathematics gap over this later time period.

Significant test score disparities remain between blacks and whites and between Latinos and whites, particularly in terms of their socioeconomic circumstances and achievement scores. While there has been a 20 per cent reduction in the black-white mathematics test score gap, the unadjusted differences remain about 0.85 of a SD in mathematics, a large difference. Moreover, despite the large gains in the family background measures considered here, 41 per cent of the black students in the 1992



cohort were living in poverty compared with 19 per cent of white students. Gaps in the other social background measures remain as well, such as black students being more likely to attend schools that are high-minority and low SES. In our decompositions for 1992, changes in the measures for students' socioeconomic background, track placement, and minority school composition when scaled to the 1972 coefficients corresponded to decreases in the persisting gap in black-white mathematics achievement. Thus, while a great deal of progress has been made in improving the conditions of black students relative to whites, substantial inequalities remain.

When considering the Latino-white test score differences, we found that the mathematics gap was 0.88 of a standard deviation in 1972 and converged to 0.60 of a standard deviation in 1992 — a 32 per cent reduction in the gap. Yet, it is important to note that the 0.60 difference between Latino and white students' mathematics scores remains large. Moreover, despite the changes in family background and school measures considered here, 49 per cent of the Latino students in the 1992 cohort were living in poor families, while about one-fifth of white students were living in poverty. Similar to their black counterparts, Latino students were more likely to attend schools that have traditionally been underserved by the American education system, as proxied by the high per cent minority and low socioeconomic status of those schools. In our decompositions for 1992, changes in the measures for students' socioeconomic background, track placement, and minority school composition corresponded to decreases in the Latino-white gap in mathematics scores. Again, while some progress has been made at different times for Latino students, the most recent years in the data we analyzed suggest that our society — and its social policies and educational system — needs to devote serious attention to improving the family and school conditions of Latino students.

#### POLICY IMPLICATIONS OF OUR ANALYSIS

Although we were able to examine the relationships between students' test score gaps and several family and school measures, it is important to note that our data do not allow us to attribute cause to any one factor in particular. Moreover, we were limited in our study to factors that could be measured in consistent ways over time. Thus, some other important family and school measures may be omitted from our analyses; for example, our findings may have changed significantly if we were able to control for students' prior achievement. Because of these and the other limitations noted previously, we need to be cautious about the policy implications we draw from our analyses. However, the general correspondence that we found between family and school measures and the student mathematics achievement gaps suggests there are some policy implications worth considering.

While sorting out the relative contributions of families and schools to the black-white and Latino-white achievement gaps is a complex exercise — limited by a lack of nationally representative data and consistent measures over time — it is important to think about policies that support families, provide opportunities to students within

schools, and provide experiences to students across schools that may improve their academic achievement.

For example, the federal legislation of *No Child Left Behind* (NCLB) aims to support student achievement in school by supporting not only schools, but also families. Parent involvement in their children's academic activities at home is emphasised in NCLB — something previous work has shown is related to academic achievement (see Phillips et al., 1998; Turnbull et al., 1999, 2001). Yet, one of the consistent challenges of schools, particularly high-poverty urban schools, is to actively engage a significant number of parents in support of the school (Lareau, 1989, 2002). Despite the significant challenges of trust among schools and different racial-ethnic minorities (Bryk and Schneider, 2002), federal and state support for parent involvement in the schooling activities of their children may be helpful if sustained in meaningful ways over time. Because NCLB requires states and districts to monitor the black-white and Latino-white achievement gaps in mathematics and reading, there may be evidence available in the near future from states about whether parent involvement activities supported by federal funding are associated with closing of achievement gaps.

Because of the correspondence between improved parents' socioeconomic circumstances and decreases in the black-white and Latino-white mathematics score gaps, policies that support the advancement of educational attainment, occupational attainment and wages are also worthwhile. A key factor in improving socioeconomic circumstances is access to higher education (Becker, 1993; Sewell and Hauser, in press). While there is a great deal of controversy about providing racial preferences for college admission, policymakers need to think about revising affirmative action policies in higher education to provide black and Latino students with advanced educational opportunities (Kane, 1998; Wilson, 1999). As the labor market payoff to a college education has increased and as admission to elite colleges and universities has become more competitive, providing racial preferences during the admissions process has certainly become increasingly controversial and contested.

As our society becomes increasingly diverse, addressing such challenges is a worthwhile exercise. As Kane (1998) argues,

The debate over affirmative action in college admissions will depend on a careful weighing of the value of racial diversity on college campuses against the real costs imposed on the students who are not admitted. In social policy debates, the easy answer — promising social benefits without social costs — usually proves ephemeral. The debate over affirmative action in college admissions is likely to be no different. An end to racial preference would seem to impose real costs on minority youth. Thus there is no avoiding the difficult trade-offs to be made. (p. 453)

Because of the positive changes in black and Latino families' socioeconomic circumstances we found in our analyses, their correspondence with closing the achievement gaps, and the large gaps in achievement and socioeconomic circumstances that remain, dealing with these difficult trade-offs is a policy exercise worth the work and debate. As Wilson (1999) notes, "it could take several

generations before adjustments in socioeconomic inequality produce their full benefits” (p. 98) (see also Jencks and Phillips, 1998).

In addition, our analyses suggest that educational policy and reform needs to be attentive to educational opportunities *within* schools and *between* schools by addressing issues related to secondary school tracking and the increasing isolation of minority students in predominately minority schools. Our analyses show that there have been significant advances for black and Latino students who reported academic track placement in the early 1990s compared with the early 1970s. A large portion of the black-white and Latino-white mathematics score convergence corresponded to the increase over time in black and Latino students who reported college track placement compared with white students. Although our analyses cannot attribute cause to our tracking measure and may overestimate the academic track coefficient, the correspondence we find in our analysis is consistent with those researchers who speculate that tracking has played an important part in the closing of the achievement gaps (see Cook and Evans, 2000; Grissmer et al., 1998; Porter, in press). Thus, further attention to tracking in research and policy is worth consideration.

Tracking today differs a great deal from the organisation of tracking in the 1960s and 1970s (see Lucas, 1999; Oakes, 1985; Oakes et al., 1992), but there have been questions about whether these changes have benefited minority students. For example, Ferguson (1998) has argued that changes in the organisation of tracking would not decrease the achievement gaps unless there were substantial differences in the curriculum and courses taken. There is good reason to believe that many students, especially those who are black and Latino, are experiencing such changes to the curriculum (see Berends et al., in press; Lucas and Gamoran, 2001; National Science Board, 2002). With more students — black, Latino, and white — taking academic track classes, there has been concern that the increasing number of lower-achieving students taking academic courses has resulted in a dumbing down of the curriculum. However, analyzing teacher logs over the school year, teacher questionnaires of content, the cognitive demand of the content covered, and observations, Porter and colleagues find no evidence that teachers are dumbing down the content of mathematics and science to accommodate students (Porter, in press; Porter, Kirst, Osthoff, Smithson and Schneider, 1993). Thus, educational policies and reforms that require students to take college preparatory courses like mathematics are likely to further narrow the achievement gap, or at least keep it from widening.

In addition to the implications for how tracking is organised, our analyses point to between-school factors that policymakers need to keep in mind when framing family and educational policies. We found that there was an increasing proportion of high-minority schools in the early 1990s compared with the early 1970s, and these changes suggest diverging test scores rather than the observed convergence in scores between black and white students and between Latino and white students. Others have found similar trends in other data (Orfield, 2001; Orfield and Yun, 1999). Policies that address the increasing racial isolation of students in predominantly minority schools (like college admissions policies) can certainly be controversial.

However, recent state and district policy initiatives to address school funding issues and school composition are likely to be worthwhile in improving the racial balance of schools.

For example, using socioeconomic circumstances for admissions purposes in elementary and secondary schools may hold some promise in diversifying schools racially and ethnically (even though using such criteria for college admissions has been hotly debated [see Kahlenberg, 1996; Kane, 1998; Wilson, 1999]). While the correlation between the racial-ethnic and socioeconomic composition of schools is not perfect, Flinspach, Banks and Khanna (2003) found that school districts may be able to use socioeconomic measures such as family income to preserve racially diverse schools. Achieving such balance in schools prevents racial isolation, but also ameliorates some school problems related to poverty (see also Kahlenberg, 2001).

Other educational policies that have gained currency include school choice, vouchers, and charter schools. While choice plans may help to create more racially diverse schools (Goldring and Smrekar, 2002; Kahlenberg, 2001), the evidence is far from complete about whether such plans reduce racial isolation across the nation as a whole and whether choice plans contribute directly to closing achievement gaps (Gill et al., 2001; Zimmer et al., 2003). This does not mean, however, that such policies should not be pursued if they promote desegregation in ways that provide educational opportunities and improve academic achievement. As choice plans are developed and implemented under NCLB, the next few years will be telling in terms of the positive and negative effects of different choice policies.

In spite of the public policies that may contribute to the closing of the achievement gap — whether by providing more support to families, increasing educational opportunities within schools, or decreasing the racial isolation between schools — it is important to understand that family and welfare policies need to be coordinated with educational policies, a complex, yet critical interplay that is often ignored by policymakers. Without thinking about how educational policies complement or conflict with policies related to such spheres as welfare, work and housing, the goal of narrowing achievement gaps will continue to face significant obstacles.

When commenting on research that focuses on academic achievement score gaps, Wilson (1999) argues that policymakers, educators, and researchers need to understand the impact of relational, organisational, and collective processes that embody the social structure of inequality. Included among these processes are the institutional influences on mobility and opportunity; the operation and organisation of schools; the mechanisms of residential racial segregation and social isolation in poor neighbourhoods; categorical forms of discrimination in hiring, promotions, and other avenues of mobility; ideologies of group differences shared by members of society and institutionalised in organisational practices and norms that affect social outcomes; unequal access to information concerning the labour market, financial markets, apprenticeship programs, and schools; the activities of employers' associations and unions; government policies involving taxation, service, investment and redistribution; and corporate decisions concerning the location and mobility of

industries. In the long term the programs that will have the greatest effect are those that attack *all* aspects of the structure of inequality (p. 508).

Only then, Wilson continues, will we be able to drastically reduce and hopefully eliminate the differences in social context that create the present black-white and Latino-white achievement gaps.

The findings reported in our analysis, although addressing a tiny portion of Wilson's agenda, hopefully contribute to our understanding of the correspondence between family and school changes and changes in student achievement gaps, and advance our thinking about coordinating public policies to support students, particularly students of colour. Time will tell whether our society has the commitment, will and capacity to further reduce student achievement gaps.

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Table 4.6: Family Background, Individual, and School Measures for Longitudinal Studies High School Senior Cohorts

1972 High School Seniors	All		Black		Latino		White	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Number of students	14,469		1,719		1,380		11,370	
<i>Math IRT</i>	51.14	9.80	42.31	8.25	44.18	8.59	52.46	9.34
<i>Female</i>	0.50	0.50	0.57	0.50	0.51	0.50	0.50	0.50
<i>Academic track</i>	0.47	0.50	0.28	0.45	0.26	0.47	0.50	0.50
<i>Income quintile 1</i>	0.34	0.47	0.61	0.49	0.57	0.46	0.30	0.46
<i>Income quintile 2</i>	0.16	0.37	0.19	0.39	0.20	0.38	0.16	0.36
<i>Income quintile 4</i>	0.13	0.34	0.04	0.20	0.05	0.23	0.14	0.35
<i>Income quintile 5</i>	0.12	0.32	0.03	0.16	0.03	0.19	0.13	0.33
<i>Missing income data</i>	0.21	0.41	0.19	0.39	0.23	0.40	0.21	0.41
<i>Father's education</i>	12.54	2.43	11.27	1.83	11.32	1.87	12.73	2.44
<i>Missing father's education</i>	0.01	0.11	0.04	0.20	0.03	0.22	0.01	0.10
<i>Mother's education</i>	12.31	2.04	11.57	1.92	11.04	1.95	12.45	2.03
<i>Missing mother's education</i>	0.01	0.10	0.02	0.15	0.03	0.12	0.01	0.09
<i>Parents' Maximum SEI</i>	36.93	26.81	19.72	24.07	21.70	25.03	39.55	26.23
<i>Missing SEI data</i>	0.19	0.40	0.44	0.50	0.35	0.49	0.16	0.37

Cont: Table 4.6

1972 High School Seniors	All		Black		Latino		White	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Number of schools	875		360		327		846	
<i>School mean SES</i>	-0.05	0.51	-0.21	0.47	-0.12	0.48	-0.03	0.50
<i>School per cent minority</i>	19.08	25.94	36.21	28.01	32.53	26.34	16.60	22.13
<i>Private school</i>	0.07	0.25	0.05	0.21	0.06	0.23	0.07	0.25
<i>Suburban school</i>	0.48	0.50	0.38	0.48	0.40	0.49	0.49	0.50
<i>Urban school</i>	0.29	0.46	0.44	0.50	0.48	0.49	0.27	0.45
Number of students	20,888		2,593		4,040		14,255	
<i>Math IRT</i>	48.95	10.07	42.05	8.20	42.99	8.30	50.96	9.62
<i>Female</i>	0.51	0.50	0.54	0.50	0.45	0.50	0.52	0.50
<i>Academic track</i>	0.39	0.49	0.35	0.48	0.25	0.48	0.42	0.49
<i>Income quintile 1</i>	0.29	0.45	0.51	0.50	0.38	0.47	0.24	0.43
<i>Income quintile 2</i>	0.13	0.33	0.14	0.35	0.14	0.37	0.12	0.33
<i>Income quintile 4</i>	0.15	0.36	0.08	0.28	0.12	0.29	0.17	0.37
<i>Income quintile 5</i>	0.16	0.37	0.06	0.24	0.11	0.26	0.19	0.39
<i>Missing income data</i>	0.10	0.30	0.13	0.34	0.08	0.33	0.10	0.30
<i>Father's education</i>	12.88	2.51	11.76	2.04	11.98	2.50	13.19	2.53
<i>Missing father's education</i>	0.09	0.28	0.23	0.42	0.12	0.33	0.06	0.24
<i>Mother's education</i>	12.65	2.13	12.22	2.12	11.90	2.11	12.84	2.10
<i>Missing mother's education</i>	0.05	0.23	0.10	0.31	0.08	0.25	0.04	0.19

Cont: Table 4.6

1992 High School Seniors	All		Black		Latino		White	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
<i>Parents' Maximum SEI</i>	47.79	22.26	38.47	24.72	39.98	23.08	50.64	20.77
<i>Missing SEI data</i>	0.03	0.16	0.07	0.26	0.04	0.22	0.01	0.12
Number of schools	905		466		507		838	
<i>School mean SES</i>	-0.05	0.56	-0.04	0.56	-0.06	0.55	0.04	0.54
<i>School per cent minority</i>	26.11	31.13	36.67	31.87	28.25	26.33	20.82	25.32
<i>Private school</i>	0.12	0.32	0.10	0.30	0.10	0.31	0.12	0.33
<i>Suburban school</i>	0.47	0.50	0.44	0.50	0.47	0.50	0.50	0.50
<i>Urban school</i>	0.25	0.43	0.36	0.48	0.26	0.44	0.21	0.41
Number of students	11,661		1,022		2,197		8,442	
<i>Math IRT</i>	53.40	9.07	47.36	8.57	49.71	8.42	54.71	8.66
<i>Female</i>	0.51	0.50	0.54	0.50	0.45	0.50	0.50	0.50
<i>Academic track</i>	0.47	0.50	0.41	0.49	0.25	0.49	0.49	0.50
<i>Income quintile 1</i>	0.25	0.43	0.41	0.49	0.38	0.46	0.19	0.39
<i>Income quintile 2</i>	0.14	0.34	0.18	0.39	0.14	0.37	0.13	0.33
<i>Income quintile 4</i>	0.19	0.39	0.11	0.32	0.12	0.34	0.21	0.41
<i>Income quintile 5</i>	0.13	0.33	0.04	0.19	0.11	0.24	0.15	0.36
<i>Missing income data</i>	0.16	0.37	0.14	0.35	0.08	0.34	0.14	0.35
<i>Father's education</i>	13.67	2.46	12.96	2.13	11.98	2.27	13.92	2.44
<i>Missing father's education</i>	0.14	0.35	0.25	0.43	0.12	0.35	0.11	0.31

Cont: Table 4.6

	All		Black		Latino		White	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
1992 High School Seniors								
<i>Mother's education</i>	13.29	2.30	12.96	2.26	11.90	2.25	13.50	2.25
<i>Missing mother's education</i>	0.11	0.31	0.12	0.32	0.08	0.29	0.09	0.28
<i>Parents' Maximum SEI</i>	47.19	21.55	40.63	22.70	39.98	21.68	49.58	20.57
<i>Missing SEI data</i>	0.05	0.21	0.06	0.24	0.04	0.23	0.03	0.18
Number of schools	1,245		396		457		1,063	
<i>School mean SES</i>	0.05	0.76	-0.08	0.69	-0.15	0.70	0.13	0.72
<i>School per cent minority</i>	25.37	29.67	42.10	31.90	37.20	27.35	18.12	22.10
<i>Private school</i>	0.16	0.37	0.11	0.31	0.12	0.34	0.17	0.38
<i>Suburban school</i>	0.37	0.48	0.33	0.47	0.34	0.48	0.40	0.49
<i>Urban school</i>	0.36	0.48	0.44	0.50	0.45	0.48	0.30	0.46

*Table 4.7: Relationship of Individual, Family Background, and School Measures to Seniors' Mathematics Achievement in Longitudinal Studies Data, 1972 - 1992*

Variable	1972			1982			1992		
	Coefficient	SE	DF	Coefficient	SE	DF	Coefficient	SE	DF
<i>Intercept</i>	44.61 <sup>a</sup>	0.53	869	38.51 <sup>a</sup>	0.48	899	42.10 <sup>a</sup>	0.62	1239
<i>Female</i>	-2.26 <sup>a</sup>	0.13	13581	-1.11 <sup>a</sup>	0.11	19970	-0.85 <sup>a</sup>	0.14	10403
<i>Academic track</i>	9.44 <sup>a</sup>	0.14	13581	8.12 <sup>a</sup>	0.12	19970	6.69 <sup>a</sup>	0.15	10403
<i>Income quintile 1</i>	-1.54 <sup>a</sup>	0.22	13581	-0.98 <sup>a</sup>	0.17	19970	-1.41 <sup>a</sup>	0.24	10403
<i>Income quintile 2</i>	-0.41 <sup>b</sup>	0.20	13581	-0.25	0.19	19970	-0.85 <sup>a</sup>	0.22	10403
<i>Income quintile 4</i>	0.01	0.21	13581	0.14	0.18	19970	0.29	0.21	10403
<i>Income quintile 5</i>	-0.31	0.23	13581	-0.07	0.18	19970	0.67 <sup>a</sup>	0.25	10403
<i>Missing income data</i>	-0.25	0.23	13581	-0.72 <sup>a</sup>	0.22	19970	0.05	0.24	10403
<i>Father's education</i>	0.27 <sup>a</sup>	0.03	13581	0.42 <sup>a</sup>	0.03	19970	0.41 <sup>a</sup>	0.04	10403
<i>Missing father's education</i>	-0.22	0.68	13581	-0.45	0.23	19970	-0.45	0.24	10403
<i>Mother's education</i>	0.18 <sup>a</sup>	0.04	13581	0.18 <sup>a</sup>	0.03	19970	0.22 <sup>a</sup>	0.04	10403
<i>Missing mother's education</i>	-3.25 <sup>a</sup>	0.77	13581	-1.40 <sup>a</sup>	0.29	19970	-0.09	0.27	10403

*Cont: Table 4.7: Relationship of Individual, Family Background, and School Measures to Seniors' Mathematics Achievement in Longitudinal Studies Data, 1972 - 1992*

Variable	1972			1982			1992		
	Coefficient	SE	DF	Coefficient	SE	DF	Coefficient	SE	DF
<i>Parents' maximum SEI</i>	0.01 <sup>a</sup>	0.00	13581	0.04 <sup>a</sup>	0.00	19970	0.03 <sup>a</sup>	0.00	10403
<i>Missing SEI data</i>	-3.38 <sup>a</sup>	0.22	13581	-0.28	0.38	19970	-0.05	0.35	10403
<i>School mean SES</i>	0.73 <sup>a</sup>	0.23	869	1.39 <sup>a</sup>	0.23	899	1.04 <sup>a</sup>	0.22	1239
<i>School per cent minority</i>	-0.05 <sup>a</sup>	0.00	869	-0.06 <sup>a</sup>	0.00	899	-0.04 <sup>a</sup>	0.00	1239
<i>Private school</i>	0.27	0.35	869	0.1	0.35	899	-0.62	0.41	1239
<i>Suburban school</i>	-0.93 <sup>a</sup>	0.25	869	-0.24	0.23	899	-0.07	0.29	1239
<i>Urban school</i>	-1.04 <sup>a</sup>	0.29	869	-0.22	0.29	899	0.28	0.35	1239

## New Research in a Sophisticated Theoretical context

*Hetty P.J.M. Dekkers*

### INTRODUCTION

Educational (in)equality is one of the most important issues in educational sociology. It has been high on the agenda since the 1960s. During many debates and discussions on the subject, educational sociologists and investigators in related fields have pondered the theoretical and practical aspects associated with the problem of providing equal educational opportunity for various groups.

Researchers have focused on highlighting inequality and tracing explanations for the findings, inspired to varying degrees by theory. At the same time many viewpoints have come into play, ranging from the extreme determinist position to those in which the potential to reconstruct society, i.e. a more meritocratic and emancipatory school of thought, predominated. Nowadays the issue of educational inequality is often summed up in terms of 'accessibility of education'. This means accessibility in the broadest sense: not only having various school types accessible to various groups of pupils, but particularly with regard to the educational results of these groups. When emphasis is placed specifically on the role of the school within this context, the results can also be expressed as differential effectiveness.

This paper attempts to review the results of many years of scientific developments concerning this topic and culminates in giving starting points for current empirical research. First, I explain what I mean by accessibility of education, in terms of meritocracy versus reproduction, and selection and effectiveness. Then I deal briefly with the debate on the influence of nature versus nurture; the role innate or acquired intelligence plays in achieving academic results. I then discuss comprehensive educational-sociological theories on education and equality as well as the more empirically-focused educational effectiveness and school improvement research. This section deals with the relationship between reproduction and emancipation/compensation. Finally, the developments outlined are drawn together within the description of a concrete line of research which builds on these theoretical and empirical viewpoints and findings. I discuss current research which investigates to what extent (secondary) education is meritocratic or reveals social inequality. Our current state of knowledge and recent research for two selection points (subject choice and dropping out) is described.



## ACCESSIBILITY FROM A MERITOCRATIC PERSPECTIVE

As has already been mentioned, accessibility of education refers nowadays to equal opportunities in education, to which we generally add the qualifying phrase: with equal ability. Unlike earlier times, when social positions were determined by background and influence and social-moral virtues like uprightness, courage and modesty counted in education, from the early twentieth century on — first in society and then in education — the view arose that merit, achievement and ability were important and that selection therefore needed to take place. For instance, when the first higher secondary schools were introduced in the Netherlands in 1863, the Dutch statesman J.R. Thorbecke did not want to attach any meritocratic conditions to the entrance criteria for this type of school. However, the loud protests from teachers, who did not want to teach widely heterogeneous classes, finally won him over (van Dijk, 1997). Later the relationship between good academic results and social position developed. Education then acquired what is known in sociological terms as an ‘allocation and selection’ function: educational achievement became a measurement of the ability to hold social positions. It is only in the second half of the twentieth century that ‘meritocracy’ officially entered educational terminology. Michael Young (1958) was the first to describe the principle of ‘selection according to talent’ in education and society and, in fact, satirised the extreme forms of this. He stated that when people are perfectly and definitively selected according to intellectual ability, and social mobility is thus stabilised at a certain biological level there will once again be extreme inequality. However, he was being sardonic and, fortunately, in reality there are so many barriers to a meritocratic society and education system that we need not fear such an extreme situation. It appears extremely difficult, especially in education, to come anywhere close to a proper appreciation and utilisation of merit, ability, aptitude, achievement or whatever other term one might use. That is because there are still too many unresolved issues in relation to the education and meritocracy combination. I will discuss the most important of these.

The first issue concerns the interpretation of the term “meritocracy”. It is not clear-cut what is meant by education — and subsequent social opportunity — based on merit or aptitude. Does it involve ability (if so, what type?), talent as such, or talent converted into achievement (requiring effort)? In education, does it involve intelligence or educational attainment?

Who decides what merit is? Does the same elite determine what is relevant and less relevant? Is it not the case that for different groups within society other tastes and aspirations apply, and are these tastes and aspirations accorded equal worth (for example girls’ choice of non-scientific subjects or the lower technical education choices of working-class boys)? Is ‘merit’ not a fairly subjective term?

If we think we know what merit or aptitude is, how is this then measured? Do our intelligence tests have any bias and do they measure every relevant ability? Do achievement or test scores measure suitability’ for secondary education or social

positions? In this context, are motivation and aspiration tests a relevant means of selection?

With regard to psychological tests, Hofstee (1996) in relation to Young's satirical writings maintains it is a blessing that these are anything but perfect and that thankfully we are a long way of from a true meritocracy. De Groot (1966) criticised the importance placed on grades. He argued that in the current context of rapid social and technological developments, other kinds of qualities, such as the ability to be flexible in a changing world, are becoming increasingly important. In education, developing a positive attitude towards lifelong learning can be seen as a merit. In short this issue demonstrates what Iris Young (1990) termed the 'myth of merit': the myth that we should know exactly, and be able to measure, what merit or ability is.

In addition to the problems of defining and measuring merit, it must be asked whether our society and education system are indeed so meritocratic.

Attempts to establish the extent to which merit determines position in society have yielded mixed results. Goldthorpe (1997) summarised the results from several studies in which researchers attempted to measure Increased Merit Selection (IMS), i.e. the claim that in modern society, merit increasingly determines the education and social position of individuals and that the influence of social background is diminishing (Jonsson, 1992). While this claim could be validated to a certain extent in American and British studies up until the late 1970s, in the 1990s the hypothesis was rejected. The change in results may be due to improvements in statistical techniques, which have become more reliable in recent years, or could indicate that "glass ceilings" are preventing talented individuals from fulfilling their potential.

From the foregoing it can be concluded that education as currently carried out is not really capable of sourcing talent among all levels of society and developing that talent into achievement and social success. We touch here on the effectiveness of education: by selection based on ability and effective exploitation of this, education institutes determine the accessibility or meritocratic level of education.

It is also an illusion that privileged families are open to the improvement of outcomes for those less privileged. As has been noted, as well as forming the elite that determines what merit is, the more privileged deploy their own 'weapons' to maintain their position: they give their children extra support, materially or otherwise, that enable them to follow courses abroad and so on.

Empirical research shows that merit is by no means fully translated into success. While it can be demonstrated that positions people have are in part determined by achievement, ambition and effort, at the same time the impact of ascribed attributes such as class and status, as well as social relations, sub-cultural background, ethnic origin and other group-linked influences is immense.

Therefore, inequality in education has by no means a purely meritocratic basis. It is now emerging that inequality does not directly arise out of belonging to a certain social class, but from a combination of (unequal) abilities (whether valued and/or developed in education) *and* backgrounds.

While there are many crucial individual components to inaccessibility of education or unequal opportunity, these are still often linked to the fact that

education is not meritocratic enough and that too many background factors play a role, albeit less directly than in non-meritocratic ideologies. Later in this paper I describe group-linked manifestations of inequality in education that at least suggest that they have not arisen entirely from a meritocratic basis.

## NATURE OR NURTURE

### *The intelligence debate*

Differences in school careers correlate highly with the previous educational achievement of pupils. How do we explain the huge differences between groups of pupils concerning achievement and school career positions? To a great extent (though by no means entirely) these are related to intelligence test scores. Within the context of striving towards meritocratic education, it is of immense importance to know how far intelligence is a predetermined fact, and to what extent it is a characteristic that can be developed and influenced. In education, students are measured and assessed using intelligence tests (for ability), test scores (educational achievement) and so on. The question remains as to what these instruments are measuring? Are achievements in these tests chiefly the result of nature, so that ability or merit is being measured? Is this ability of a biological/genetic nature, or do factors related to nurture play a role, and if so, which ones? These questions are even more relevant when differences in scores between social groups are observed, since the findings could have implications for society.

The first researcher who caused a stir by linking the nature-nurture issue with the socioeconomic/social position of (groups of) people was Jensen (1969). He claimed that it is largely intelligence that pre-sorts people for social positions, and that intelligence is 80 per cent hereditary and 20 per cent linked to nurture and environment. He also observed an IQ difference of 15 points (the equivalent of one standard deviation) between black and white people. In 1973 Herrnstein followed this up with a similar story: the allocation of positions within society is based on cognitive achievement which is chiefly hereditary. In the Netherlands, de Groot (1972) came to the same conclusion when studying higher education selection. All these researchers were heavily criticised and even intimidated for coming up with such a story in the 1970s, a period when social change effected by government was high on the political agenda.

In 1972 Jencks and his colleagues attempted to explain social positions through both social background as well as intelligence and training, but could only account for 30 per cent of the variation in this way. He attributed a large role to the factor 'luck'. According to him the heritability of IQ is 'only' 50 per cent. Only later was it gradually realised that intelligence tests partly reflected school knowledge so that they were not a pure measurement of innate ability. In other words they were not culture free (Serpell, 1979). In 1994 in the Netherlands Bros and Dronkers stated that intelligence was 30 per cent social status and also established that the IQ of a six year old can only predict 10 per cent of the academic level attained when corrected

for social class of origin. Thus, it is clear that intelligence plays a role, but unclear to what extent it is a determinant factor and to what extent academic results, school career and later social positions can be explained via 'developed' intelligence or other environmental factors.

The intelligence debate continues to rage. Recently, Herrnstein and Murray wrote *The Bell Curve* (1994), which became well-known in its field. Again the extent to which intelligence and school achievement are linked to social positions, i.e. the extent to which society is a meritocracy, was examined. On the whole, the same results were found: people in higher socioeconomic positions have a higher intelligence. There were also group effects: the black population scored lower on intelligence and were thus in lower job positions, while Asians scored higher than whites. The implications the researchers attached to these study results caused an uproar. They concluded that there was no point in having all manner of intervention programmes to improve the educational lot of disadvantaged groups since intelligence is predetermined. Without critically looking at the nature of intelligence tests, for instance, they assumed relevant relationships between intelligence, as measured by IQ tests and social success.

It is beyond the scope of this chapter to discuss in detail every aspect of the intelligence debate. The fact that it is still fiercely pursued means that the last word on it remains to be spoken. I will confine myself to a few remarks in relation to current thinking in the debate.

To begin, it is unclear how intelligence evolves. Is it purely genetic, or does intelligence develop, as the field of behavioural genetics is investigating, in conjunction with the environment (Loehlin et al, 1989; Leseman and Boom, 1999)? In recent years the nature-nurture controversy was tackled by Bronfenbrenner and Ceci (1994), who use an interactionist bio-ecological model as starting point. They discussed proximal processes in which interrelated biological and social factors shape the development, including the intellectual development, of a child. The intergenerational differences which Flynn established (1992) also suggest the importance of environmental influences on the development of intelligence.

At the same time it is still unclear exactly what intelligence tests measure. To what extent do they measure genetic ability (whether developed in conjunction with the environment or not) and how far is what is taught at school incorporated into the tests so that the tests partly measure school results? To what extent are the tests biased, in the sense of having items which are more accessible for middle-class pupils or for boys or girls (sex bias)?

There are also quite a few methodological issues regarding research into differences between groups. Differences *within groups* can be just as big and should be taken into account in the investigation. New statistical techniques make it possible to isolate the various influences more easily.

Finally, the largest part of differences in education and social positions cannot be explained by intelligence, and certainly not by early measured intelligence. Thus it is necessary, with the debate in the background, to try and trace the *environmental* factors which, via the influence of intelligence scores or not, play a role in obtaining educational results and subsequent social positions.

## ENVIRONMENTAL EXPLANATIONS

*Reproduction/emancipation*

As we have seen there are many problems associated with the genetic intelligence explanation of inequality in education, especially as far as group-related differences are concerned. In view of the unreliability of measurement (what is being measured and how) it is extremely important to investigate the role of group attributes (environment, nurture), especially if it appears that with equal intelligence scores unequal school careers are being followed.

Sociologists have traditionally been preoccupied with social inequality, or with inequality linked with positions held by people in relation to each other. Within the context of inequality issues, educational sociologists have also examined inequality in education but not with regard to individual pupils, i.e. low achievers, but concerning groups of pupils with the same social backgrounds.

The study of inequality in education was originally concerned with educationally disadvantaged groups, which were also socially and economically disadvantaged: the lower social and economic *classes*, to use the terminology that was then current. For various reasons, ethnic origin and gender were largely absent from debates. Ethnic origin did not feature because the situation was not yet an issue (in the Netherlands immigrants were not permanent residents) or was not seen as a problem from that viewpoint (e.g. immigration in the United States was not culturally and ethnically labelled). Gender was not considered because education did precisely what it had to do by carrying out its allocation function in a proper manner, i.e. training girls for the tasks they were intended to fulfil.

The first explanations of unequal participation in education involved quite obvious issues such as materials, financial restraints and schools not being accustomed to providing education for working-class children. This was prior to large-scale studies and, empirically, could not be defended properly. Around the same time, the nature-nurture (IQ) debate began, which at first focused on explaining individual differences among pupils. However, as more group-related differences were established in large-scale studies, so economic, cultural and social environmental explanations were sought. Explanations from educational sociologists in particular were related to family influences. In 1971 Bernstein hypothesised that in the first instance the language deficiency of working-class pupils should be seen as responsible for their low-achieving school performance and career. This approach became known as the Deficiency Hypothesis, and assumed that working-class students' use of language was fragmented and inferior. Critics, including Labov (1972), emphasised that while there were indeed obvious language differences between these students and those from middle-class backgrounds, these so-called deficiencies were simply rich and varied differences, not deficiencies as such (the Difference Hypothesis). Incidentally, later research showed that pupils experienced great difficulty in education when the language they used at home was not the same as that in school.

In the 1970s there was also the reproduction debate. On the one hand, at a time when it was felt social change could be effected via government policies, the principle of meritocracy was adhered to, while on the other hand, those that took up the reproduction thesis position opposed this optimism. This deterministic view of education implies that schools contribute to the continuation of social inequalities in society (Bowles and Gintis, 1976): both the poorer outcomes of working-class boys and gender inequality are maintained by mainstream views. Within this ideology it was also stated that there was not a reserve of talent among pupils of less favourable backgrounds (van Heek, 1968). However this view was short-lived, partly because from large-scale studies it was increasingly evident that necessary changes to attitudes in education were being made. For instance, the immense catching up of women in education was beginning, while many working-class children were getting through to university. While education often appeared to reproduce, it also emancipated.

One of the explanations for the reproduction process in the ensuing debate was the culture-theoretical viewpoint. This view not only offers an explanation for reproduction, but in a more optimistic version provided points of contact to promote equal opportunity. The most important exponent of reproduction theory is the French sociologist Pierre Bourdieu, whose other theories are again currently attracting wide interest. He emphasises the role of culture in society and the ownership or appropriation of this by various groups. He actually expands on Bernstein's linguistic explanation to include culture in the broadest sense. His theory is that the taste and lifestyle of privileged groups is a form of cultural capital that enables them to fit seamlessly into the cultural climate of schools. Along with economic and social capital, this cultural capital is a crucial form of support for educational and social opportunity. Any other type of cultural (sub-cultural) background, such as that of working-class children or children from minorities, therefore creates disadvantage in education. As well as noting the primary effects of the family, Boudon (1974) also distinguishes secondary effects related to choice processes in education. Based on rational action theory, he assumes that the cost-benefit analysis for various moments of choice in the school careers of working-class pupils is different to that of pupils from more privileged backgrounds.

As has already been mentioned, alongside the mainly sociological explanation theories, large-scale school and school career studies were developed in which increasingly more advanced and discriminating group and sub-group differences could be empirically established. While the detailed theories and debates described here generally lacked empirical support (apart from exceptions like de Graaf, 2000), in school career research quite *ad hoc* partial explanations could be empirically established.

### *Compensation by schools*

While sociological explanation theories were chiefly about the influence of family background (language, parents' formal education or culture), directly or via socialisation, the debates were increasingly concerned with the extent to which

schools were able to compensate for the observed disadvantages. Is school, like the family, a socialising agent which reproduces existing structures because, for instance, intelligence is hereditary or can school, in fact, make an important contribution to the educational attainment of disadvantaged pupils? In other words, to what extent can schools affect pupils' learning results, including those of disadvantaged pupils?

Contrary to Bernstein's (1970) claim that schools cannot compensate for society, in the United States large-scale compensation programmes like Head Start were launched in the 1960s to promote equal educational opportunity. These were coupled with research into the results of the investment. The effect on pupils was investigated and an attempt was made to establish the impact of schools. Initially, the effect of macro-variables like location, facilities and budget were looked at, but this produced little result (Coleman, et al. 1966). Then more internal school factors, such as school climate, staff behaviour, pupils' attitudes, relationships and interactions were investigated and effects of individual schools on their pupils' educational attainments were found (Lazar et al., 1977; Brookover, 1977; Rutter et al., 1979). From 1977 onwards, corresponding school effectiveness research was carried out in many places including the United States, United Kingdom, Australia, the Netherlands and Norway. In the United States (and to a lesser degree in the United Kingdom) this research tradition, more so than in other countries, stuck to the original perspective regarding concern for the limited opportunities of disadvantaged pupils (school improvement). Australian and Dutch school effectiveness research was more general or was concerned with methodological questions (for instance attempts to measure 'added value', the impact of a school after correcting for student intake).

Separate from the inequality issue, school effectiveness research developed insights into the manner in which schools can achieve better results among pupils. It established that schools do indeed differ consistently regarding their pupils' educational results, and that the size of these differences can be great. According to Mortimore (1997), school accounts for 10 per cent of a 30 or 40 per cent explained variance, five times more than the home environment.. It was also established that school effects can vary according to groups of pupils (differential effectiveness). One school may achieve more for its disadvantaged pupils than another (Bryk and Raudenbush, 1992), while another may give girls a greater choice of science subjects (Bosker and Dekkers, 1994). It appears likely that for such results other groups of factors are at work that go beyond the more general models.

One also sees various models being developed to illustrate school effectiveness, depending on whether this is done from the viewpoint of effectiveness in general (Scheerens & Bosker, 1997) or differentiated according to disadvantaged groups (Stringfield and Slavin, 1992). The latter models also incorporate compensatory and remedial components, which in turn can relate to home situations. In general, the importance of socioeconomic class is increasingly emphasised in school effectiveness research (and in models).

Whereas it can be established that the original educational-sociological interest in education and inequality has produced theories on family background which are

difficult to test empirically, school effectiveness research has been able to trace school factors that are in fact quite empirical by nature (exceptions include more theory-driven work by Coleman and Collinge, 1991, Scheerens, 1992 and Hopkins, 1994). Both approaches make use of large-scale studies of school careers, to which relevant large-scale social data are added. As far as the question of how best to educate disadvantaged groups, it seems high time that viewpoints from both schools of thought were more explicitly integrated than they have been up until now. In the following section I describe how it is possible to do this.

### THE CURRENT SITUATION IN RESEARCH

I have reviewed the theoretical viewpoints used when searching for explanations for differences in school career among (groups of) pupils, sometimes referring to available empirical research. This section briefly describes research up until now leading to a research programme being carried out in three Dutch universities since 1999.

Like other countries such as the United States and the UK, the Netherlands has a rich tradition in research into inequality. So far this research has mainly been undertaken from two viewpoints. On the one hand research has examined the differences between groups of pupils (the most important distinguishing variables being socioeconomic status, ethnic origin and sex) using large-scale cohort studies. In this sociological-statistical research it is possible in individual cohorts to establish differences between the school careers of groups of pupils (longitudinal), and in a series of cohorts the developments in differences between groups of pupils (cross-sectional). This type of large-scale investigation generally takes place within the context of policy issues or evaluations, such as the educational priorities policy and the secondary school core curriculum. As well as measuring pupil results and school career positions, many variables were included in the research design to enhance explanation of observed differences. As has been already stated, these were partial explanations prompted by policy questions and were not theoretically embedded. Next to this large-scale quantitative research many small-scale, qualitative studies into determinants of differences between groups of pupils were carried out. Such research is sometimes more in keeping with existing theories, even though it focussed on isolated variables leading to partial explanations and partial theories. The theoretical viewpoints, as have already been described, are inherently educational-sociological or educational (i.e. originating from school effectiveness or school organisation research), but also social- and educational-psychological as far as explanations for sex differences are concerned. Recently, attention has been given to more (quasi) experimental research: instructional or organisational policies and practices that foster accessibility have been evaluated. To summarise, explanatory research chiefly focuses on research from the viewpoint of different mono disciplines and is often concerned with only a few mediating variables. The group division is also often simple, for instance minorities (deprived) versus the white majority (privileged), so that no account is taken of interaction with other group characteristics. Moreover, this kind of research is chiefly about relative



disadvantage, i.e. differences between groups, sometimes subgroups. Absolute disadvantage, i.e. related to the capacities of individual pupils, is therefore often neglected. All in all, results relate too often to research which has succeeded in accounting for very limited amounts of explained variance, without adequate attention to interactions between factors. This underlines the need to pursue scientific explanations for the interactive effect of group characteristics, and individual, family and school characteristics for (group) differences in school careers. With respect to two subjects/research projects I describe here in concrete terms the current state of affairs regarding research and theory development, leading to the conclusion (generally supported internationally) that an attempt should be made to arrive at an insight into the interplay of factors that hinder or promote meritocratic education.

### HORIZONTAL ACCESSIBILITY

#### *The mismatch between ability and the choice of final examination subjects*

Despite the fact that in most western countries girls study just as long and at the same academic level as boys, what they study remains largely unchanged and sex-based: boys follow more technical and exact subjects, while girls choose more social and language-based studies. Thus it is no longer vertical but horizontal inequality that is now the issue. In the Netherlands the differences, for instance, in choosing mathematics B ('advanced level') and physics are so great (30 per cent of girls, compared to 60 per cent of boys) that it is highly unlikely this can be entirely explained by ability. In higher vocational education the differences are even greater. Thus the issue here concerns the accessibility or meritocracy of education. Over the past 25 years much research has been done into the determinants of gender differences within schools. Many reviews have also been published in recent years (Hyde, et al. 1990; Oakes, 1990; Dekkers, 1990; Walberg, 1991; Hanna, 1994; Keeves & Kotte, 1994; Davies et al., 1996).

The various developments in research on the subject can be summarised as follows. The more psychologically oriented research of the early years evolved from seeking explanations from basic psychological characteristics such as aggression or spatial insight (aptitudes) towards educational-psychological (learning style, attributing success or failure) and psychosocial factors (motivation, interest, expectations and perceived usefulness of subjects). In this context, family background, i.e. educational level and ethnicity of parents, especially in sociological studies, was an issue. In search of instruments to combat educational inequalities, variables within the school context (learning in single sex classes, methods, materials, interaction, assessment methods etc.) were then subjects of study. Schools appeared to differ in the extent to which pupil ability on entering secondary school was translated in a gender-neutral, meritocratic way into subject and study choices (Bosker & Dekkers, 1994). In international studies the social context is also an explanatory factor. Recently studies have been done into the combined effects of

sex, ethnic origin and socio-economic status. The effects appear to be complex rather than additive. For instance, while girls from minorities choose less technical subjects, those from higher socio-economic backgrounds more often tend to choose a technical area of study in vocational education (Dekkers, Bosker and Driessen, 2000).

Many studies are based on one or a few variables and are mono-disciplinary, when it is obvious there is an interplay of factors that leads ultimately to gender-specific (in combination with socio-economic background and/or ethnic origin) education results. Earlier attempts were made by Eccles (1986) to arrive at a coherent conceptual model to explain gender differences in educational choices. The model, and the studies carried out within its framework, chiefly concerned socio-psychological variables, with room for earlier educational experiences and achievements. The model gave less room to educational and sociological variables. A recent review from Dekkers (1998; see figure 5.1) provides starting points for an educational interdisciplinary model of variables which can explain specific subgroup education outcomes (especially choice of subjects and areas of study) in an interrelated context. Based on research results the following categories of explanatory factors are distinguished: intelligence, characteristics (e.g. learning style) and attitudes (e.g. motivation) at pupil level; socioeconomic status, ethnic origin and family composition at family level; and organisation, methods, interaction, evaluation and teaching climate at school level. Factors that refer to the (international) social context comprise the background in which choice processes take place. In the present research programme the categories and the interrelation between variables are fleshed out in greater detail.

## VERTICAL ACCESSIBILITY

### *Leaving school early*

Leaving school early is a major social and economic problem. International research has been done into dropping out of school, but comparing results is hampered by huge differences (explicit or otherwise) among nations in defining the term. In the United States a task force has even been set up in an attempt to reach an appropriate definition. Dutch researchers, analysing various national data bases, are currently working on an unambiguous definition of the term so that monitoring, research and remedies for the problem can be undertaken in a more purposeful manner.

From quantitative research into the problem it is evident that the chances of obtaining sufficient schooling to qualify for the job market are unevenly spread. For instance, in Holland the required level of schooling is considerably less 'accessible' for minorities than for Dutch-born boys. The drop-out rate among Moroccan and Turkish boys is particularly great. There are also gender differences. Boys drop out more often than girls, even among Dutch-born groups. The causes for dropping out of school early can partly be found in background data available in large scale data bases used to determine drop-out rates (secondary education cohort studies in the

Netherlands; NELS 88 in the United States), but also in qualitative research. There are many factors that are directly or indirectly linked to the phenomenon and it is not always easy to distinguish between cause and effect. Researchers differentiate between various categories of factors linked to leaving school early. These mainly relate to demographic, personal, family background, peer group or school factors, and sometimes macro-factors, such as the situation of the job market (Rumberger, 1987; Coley, 1995; Gaustad, 1991; de Vries, 1993; Dekkers & Driessen, 1997). Examples of variables at pupil level are self-esteem, school attitudes and behaviour (e.g. truancy), motivation, ambition, intelligence and educational achievement (capacities). At the family level the parents of drop-outs are often poorly educated and belong to ethnic minority groups. Ethnic minority pupils in particular appear to be more influenced, for instance, by playing truant with peers. Wu (1992) reported that until now the influence of school (organisation, management and teachers) has received scant attention since dropping out is seen as an individual problem. In the Netherlands only a few systematic studies have been done (e.g. Bosker and Hofman, 1994) on whether early school leaving occurs more frequently at certain types of secondary school and (in the sense that is intended in this area of study) whether pupils with the same capacities drop out more at certain types of schools than others (i.e. the degree of accessibility).

Various scholars have tried to combine several of the above-mentioned factors into a more coherent set of explanations. Jordan et al. (1994) refer to cumulative processes, while de Vries (1993) distinguishes subgroups of pupils that share several common characteristics. Both divide factors into push (internal school) factors and pull (external: family, work, etc.) factors. Jordan groups many of the reasons included in the NELS 88 data base into these categories. However, Rumberger (1987: 43) has pointed out for decades that a more all-embracing causal model is needed that would 'successfully identify the full range of proximal and distal influences, the interrelations among them, and their long-term cumulative effect'. Finn (1992) constructed his 'participation identification' model (in cases of success) to describe the process underlying early school-leaving, and compared this to the 'frustration self-esteem' model (in cases of failure). Apart from the work of Finn this thinking in terms of models has not been tested in empirical studies. This is now being done in the present research programme, according to a tentative model based on research outcomes and theory to date. Analogous to the project on choice of subjects, and based on the outcomes of earlier studies, a tentative interdisciplinary model to explain early school leaving can be drawn up in which the categories are pupil, family, school and context factors.

## CONCLUSIONS

In the introduction I described how empirical research that builds on various theoretical and empirical viewpoints regarding education, inequality, accessibility and differential effectiveness can be set up. I described the concept of meritocracy and raised issues concerning the extent to which meritocracy may be defined,

measured and achieved. I also summarised ongoing discussions on intelligence, and the degree to which it is determined by nature or nurture.

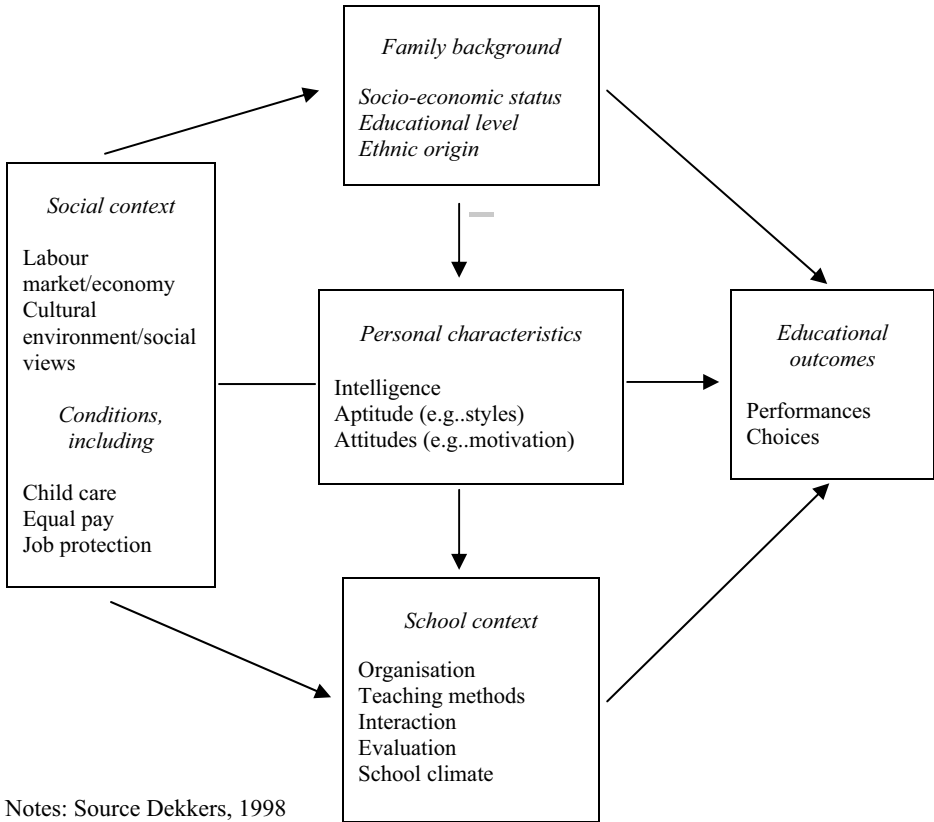
I then explored environmental explanations and factors which, via the influence of intelligence scores or not, play a role in obtaining educational results. Here it was noted that not so much a nature versus nurture debate, but what one could call a reproduction versus emancipation or meritocracy debate was, and is, on-going. This debate also plays a role in discussions on the role of the school. The question here is whether a school can compensate (for society) or in fact 'reproduces' existing social structures. Finally, I established that thus far research into environmental factors has not focused sufficiently on the link between all kinds of factors and interactions (the various effects of sub-groups), with the link with abilities (i.e. the question of meritocracy) particularly neglected. The viewpoints and considerations described result in various departure points for new research into educational inequality.

Both the examples mentioned in the previous section, of (more or less selective) school career moments where meritocracy is at stake, are part of a research programme that started in 1999 in the Netherlands: *The Accessibility of Secondary Education*. The projects concern crucial school career moments that have long-term consequences for students' further training and career options. The research projects have many features in common that are consequences of insights described in this paper. In all projects, both relative disadvantage, i.e. the differences between various groups of pupils (based on socio-economic background, ethnic origin and sex or a combination of these) and absolute disadvantage, i.e. the mismatch between ability and individual school success, are the subject of investigation. Moreover, the school career time points are investigated for an interrelated array of factors from various disciplines to explain group and individual differences (multidisciplinary explanatory models). The individual research project descriptions elaborate upon the categories in which the various explanatory variables largely overlap. For all school career moments these are variables at individual level (i.e. aptitude, earlier achievement, attitude, future expectations), family level (i.e. background, ethnic origin etc.) and school level/context. Factors that are important for each category can vary for each school career moment. The factor 'school' is given particular attention throughout.

The data in the projects consist of large-scale national data sets, supplemented by additional quantitative and qualitative data collection. In each project, analyses are carried out in the same way to test the multidisciplinary, multivariate explanatory models.

By carrying out this research programme we hope, with the results of empirical research, to acquire new insights concerning nature versus nurture, individual ability versus environment (group) influences, meritocracy versus reproduction, accessibility versus social determinism and neutral effectiveness versus differential effectiveness. More importantly, we also hope to gain more and better clues for how best to deal with elements in education and the context of education that foster inequality.

Figure 5.1: Model for (gender) differences in educational choices and performance levels



Notes: Source Dekkers, 1998

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*Emer Smyth*

### CROSS-NATIONAL PATTERNS IN EDUCATIONAL ATTAINMENT AND ACHIEVEMENT

In looking at gender differences in educational outcomes, it is important to distinguish between three sets of outcomes: (i) educational participation and attainment, that is, how far young women and men go within the educational system; (ii) educational achievement, that is, how well young men and women perform (for example, in terms of grades) at a given level of the educational system; and (iii) field of study, that is, the type of course taken within the educational system.

#### *(i) Educational participation and attainment*

Historically, men in Western countries have tended to have higher educational attainment levels than women (Spender and Sarah, 1980). Currently, among the adult population (that is, those aged 25 to 64), men are found to have more years of schooling and are more likely to reach upper secondary education (or higher) than women in two out of three developed countries (OECD, 2005). However, focusing on the adult population as a whole disguises important changes among recent cohorts of young people. If only the youngest age-group is considered (that is, those aged 25 to 34), the historical pattern is reversed with female attainment levels higher than male rates in two out of three countries. Currently, upper secondary graduation rates are higher among young women than young men in most OECD countries (OECD, 2005). Furthermore, female graduation rates for tertiary education are equal to, or exceed, male rates in roughly two out of three OECD countries. Advanced research degrees are the only level in which men continue to dominate numerically (OECD 2004, 2005). Even at this level, significant changes have taken place with the proportion of females among doctoral graduates in the United States, for example, increasing from 14 per cent in 1971 to 42 per cent in 1998 (England et al., 2004).

In sum, there has been a significant relative shift in the patterns of male and female attainment in recent years. It is important to note, however, that this shift has not taken place in all countries and the scale of such gender differences varies across countries. For example, the gender gap in upper secondary graduation rates (in favour of females) is largest in Finland, Norway, Ireland, Spain and Greece, countries with quite different educational systems from each other. The explanations

of these changes which have been proffered by commentators will be discussed in section two of this chapter.

*(ii) Educational achievement*

There are two ways of assessing educational achievement: firstly, by looking at (gender differences in) performance on (nationally or cross-nationally) standardised tests of ability; and secondly, by looking at how young women and men perform on the basis of assessment systems used within their own national (or regional) educational systems. These two approaches have complementary advantages in exploring gender differences. Cross-nationally standardised tests yield insights into the extent to which gender differences in the same outcome vary across countries. Country-specific assessment yields very useful insights into gender differences in performance and qualifications attainment which will impact on access to further education, training and employment.

An early overview (Maccoby and Jacklin, 1974) of ability test results indicated significant gender differences in verbal, quantitative and spatial ability with girls scoring higher in tests of verbal ability and boys achieving higher scores in relation to quantitative and spatial ability. However, meta-analyses of subsequent studies have indicated a decline in gender differences in performance on cognitive tasks (Linn and Hyde, 1989). Tests of mathematical ability indicate that the average gender difference is small and that differences have been declining over time (Friedman, 1989). There is also a good deal of overlap in ability scores between male and female students; males may have higher average scores in quantitative reasoning and visual spatialisation but these scores are more variable, with more males receiving very high or very low scores (Feingold, 1992).

A range of cross-national studies of performance across a range of knowledge/ability domains (including PISA, PIRLS, SIMS and TIMSS) have yielded further insights into gender variation in educational outcomes across a range of countries. These studies have generally focused on 9 year old and 15 year old students. Female students are found to outperform their male counterparts in reading literacy across all of the countries assessed, with gender differences being more pronounced among older students (OECD, 2004). However, the magnitude of the gender gap varies across countries with below average differences in Korea, Japan and the UK. In relation to mathematical literacy, significant differences are found in favour of male students in about half of the countries included in the PISA study and about one-third of those included in TIMSS (OECD, 2004). Comparing data from the 1960s to the 1980s, gender differences are found to have declined over time in nineteen countries (Baker and Jones, 1993). Patterns are somewhat inconsistent with regard to science performance; PISA results show a lack of consistent gender differences in scientific literacy while TIMSS findings indicate higher performance among males in all but one country. Any gender differences appear more pronounced among older students (OECD, 2005).

Although country differences in the size of the gender gap have been evident, relatively little attention has been paid to explaining these differences. Baker and

Jones (1993) attribute cross-national variation in maths performance to variation in the gender stratification of educational and occupational opportunities in adulthood. Thus, maths performance is more equal between male and female students in countries where women make up a higher proportion of those in higher education and the labour market and where occupations are less gender segregated. In contrast to this perspective, Gorard (2004) argues that gender differences in literacy scores are more or less universal, with comparatively little variation across countries. He attributes this gender gap not to culturally or system specific characteristics but to the type of the literacy being measured.

Gender differences are also apparent in the grades received by young people within national (or regional) educational systems. The gender gap in examination performance has been the subject of a good deal of research and policy attention in England and Wales (Epstein et al., 1998; Francis and Skelton, 2005). In 2004/5, female students achieved higher grades in their GCSE (lower secondary) exams and were more likely to achieve two or more A-level passes at upper secondary level (Department of Education and Skills, 2006a, 2006b). This performance gap emerged at the end of the 1980s (Arnot et al., 1999; Arnot and Miles, 2005). A similar pattern is evident in Scotland with females achieving higher grades at all three secondary examination levels (S4 to S6) (Scottish Executive, 2005), a gap that has been evident since the mid-1970s (Tinklin et al., 2001). The gender gap in achievement in Australia follows a similar trend to that in Britain, with a widening gap from the mid-1990s, especially in literacy attainment (Standing Committee on Education and Training, 2002). In the United States, there are no national examinations but the National Assessment of Educational Progress (NAEP) shows higher reading scores among females than males at ages 9, 13 and 17 (NCES, 2005). The gender gap in exam performance has been the focus of discussion primarily in English-speaking countries. However, similar trends have been evident in other countries. In France, female students were more likely to pass the Baccalauréat general and the Baccalauréat technologique in 2003 than their male counterparts (Peretti, 2004). In Germany, female students are more qualified to enter higher education (in terms of Abitur graduation), a reversal of the pattern evident in the 1970s and 1980s (Federal Ministry of Education and Research, 2005).

The discussion of gender differences in achievement has tended to focus on the secondary level with less attention given to tertiary education. However, research in the British context has indicated that women are more likely to obtain a 'good' undergraduate degree (that is, at least an upper second class honours award) than men; however, men are more likely than women to achieve the highest award, that of first class honours (Smith and Naylor, 2001; McNabb et al., 2002; Richardson and Woodley, 2003).

In sum, gender differences have been found in different ability domains, particularly verbal and mathematical skills. However, these differences are found to vary across countries and age groups and have generally been declining over time. More marked, however, is the emerging gender gap in examination performance evident across a range of countries, explanations for which are discussed in the second section of the chapter.

*(iii) Field of study and course choice*

In spite of significant increases in young women's educational attainment, marked gender differences persist in the types of courses taken within the educational system (Bradley, 2000). Across European countries, engineering courses at upper secondary level tend to be predominantly male while health/welfare, arts/humanities, education courses and social science/business courses are disproportionately female (Smyth, 2005). Within tertiary education, women are over-represented in the fields of humanities, arts, education, health and welfare while young men are over-represented in mathematics and computer science, engineering, manufacturing and construction (OECD, 2004). Research on gender patterns in more specific fields of study has tended to focus on science and mathematics domains. Science and mathematics participation has been found to vary significantly by gender with the 'hard' sciences (especially physics) and advanced maths typically being taken by male students while female students are more likely to take biology (Ayalon, 1995; Ditchburn and Martin, 1986; Stables, 1990; Kelly, 1981; Smyth and Hannan, 2002). Somewhat less attention has been given to the extremely low take-up rates among female students of craft-related or technological subjects at school level with fewer empirical studies addressing the processes involved (for exceptions, see Silverman and Pritchard, 1996; Cockburn, 1987). Although there are some commonalities across countries in the 'gendering' of fields of knowledge, there is also cross-national variation in the extent to which young women and men are concentrated in different types of educational courses (van Langen and Dekkers, 2005; Smyth, 2005). Changes have also taken place over time, with the feminisation of some previously male spheres such as medicine and law (Bradley, 2000; Stromquist, 1993). The potential explanations for the persistence of, and changes in, gender differences in subject choice will be discussed in the following section.

## PROCESSES SHAPING GENDER DIFFERENCES IN EDUCATIONAL OUTCOMES

*Nature or nurture?*

The resurgence of socio-biology and evolutionary psychology has contributed to an enduring view of women and men as essentially different in their behaviour. Wilson (1975), for example, saw the gender division of labour as rigidly determined by biological differences. These theoretical developments have been paralleled by a focus on (the effects of) brain size and the relative use of the left and right sides of the brain, with some commentators attributing differences in spatial ability, for example, to such biological differences (Kimura, 1992; Geake and Cooper, 2003). As a result, gender variation in educational achievement and field of study is seen as resulting from innate differences. However, such theories have been subject to criticism on a number of grounds. Firstly, these accounts ignore the way in which

sex differences reflect the complex interaction between genes, hormones and environment (Kaplan and Rogers, 2003). Secondly, they fail to adequately account for the way in which 'ability' can alter with age (Bowles and Gintis, 1976) and the fact that gender differences are more apparent among older than younger students (see, for example, PISA scores in mathematics). Furthermore, such theories do not account for the fact that gender differences in verbal and spatial/mathematical test scores have declined over time and that girls' academic grades have surpassed those of boys, in the face of presumably invariant genetic and hormonal profiles (Feingold, 1988; Hyde et al., 1990; Francis and Skelton, 2005). Finally, cross-national variation in gender attitudes and behaviour is not explicable by this perspective.

In contrast to biologically based theories, the vast majority of educational researchers have emphasised the way in which differences emerge as a result of socialisation into 'appropriate' gendered behaviour from infancy onwards. Adults are found to interact with babies differently according to their gender from early infancy (Kessler and McKenna, 1978) and children learn to categorise people on the basis of their gender from an early age (Fagan and Sheperd, 1981). Thus, children develop stereotyped notions of 'male' and 'female' from what they see and hear around them and attempt to behave in ways consistent with these conceptions (Bussey and Bandura, 1999). Gender stereotypes regarding subjects and occupations are found to be evident even among young children. Interestingly, younger children have more stereotyped notions of the 'appropriate' jobs for men and women than adolescents (Helwig, 1998; Miller and Budd, 1999). However, the extent to which a child's own occupational aspirations are gendered actually increases with age for boys but decreases with age for girls (Helwig, 1998). In general, girls tend to hold more egalitarian attitudes in relation to gender roles than boys (Burt and Scott, 2002). If gender is seen as socially constructed, then the increase in female educational attainment can be seen as a response to broader social changes in women's labour market and political participation (Arnot et al., 1999; Baker and Jones, 1993). Similarly, the persistence of gender differences in field of study can be related to the construction of scientific and mathematical spheres of knowledge as 'male' (Kelly, 1985).

### *The educational system*

In addition to exploring the impact of wider societal trends on educational outcomes, commentators have increasingly focused on the way in which the nature of the schooling system itself contributes to the production and reproduction of gender differences. This and the following sections explore the impact of a number of factors, including the educational system at a macro level, school organisation and culture, and whether schools are coeducational or single-sex in profile.

Two aspects of the educational system have been identified as key in shaping gender differences in academic outcomes: the nature and timing of differentiation into different courses or tracks, and the approach taken to student assessment. Buchmann and Charles (1995) propose that, where educational choices are made at

an early age, they are more likely to be gender-typical and that this feature, coupled with strong education-labour market linkages (for example, through occupationally-specific training), means that gender segregation is likely to be more pronounced in countries with highly differentiated, vocationally-oriented systems. Preliminary research does, in fact, indicate that educational segregation by gender, that is, the extent to which young men and women are concentrated in different fields of study, is more marked in highly tracked secondary systems, where students are required to specialise in certain spheres of knowledge at a relatively early time-point (Smyth, 2005).

A number of studies have indicated that gender differences in academic performance are, at least in part, related to the nature of assessment used. Girls are found to do better on sustained, open-ended tasks while boys focus on episodic, factual detail. As a result, boys tend to do better on multiple-choice questions while girls do slightly better when assessment is based on coursework (Sukhnandan et al., 2000; Elwood, 1999). Furthermore, the examination and assessment system tends to demand the type of writing skills (for example, narrative and descriptive) that girls are generally good at (Elwood, 2005). The extent to which changes in the mode of student assessment is responsible for a trend towards male 'underachievement' has been the subject of debate, at least in Britain. Some commentators trace the crucial tipping-point to the dramatic change brought about by the introduction of coursework as a basis for assessment in the GCSEs in Britain (Gorard, 2004; Mackin and McNally, 2006). However, others have argued that these policy changes cannot fully account for the emergence of a gender gap (Sukhnandan et al., 2000; Arnot and Miles, 2005). Much of the focus of the British debate has been on changing modes of assessment. However, it is not clear that other countries experiencing a similar trend in achievement patterns have had comparable changes in the approach to assessment. In general, while system-level approaches to differentiation and assessment have emerged as indicative factors in explaining patterns of achievement and course take-up, the extent to which macro-level characteristics of the educational system account for cross-national variation in educational outcomes by gender would appear to represent a potentially fruitful, but under-explored, direction for research.

### *School organisation and culture*

The potential impact of school organisation and culture can be examined in two distinct ways: the extent to which gender differences in achievement and subject take-up vary across schools and the way in which gender differences are produced on a day-to-day basis in the school context.

#### *(i) Between-school differences*

Research findings have been somewhat inconsistent in relation to between-school variation in the gender gap in academic achievement. Some studies in the British context have indicated that the difference in performance between male and female

students varies significantly across schools (Nuttall et al., 1989; Thomas et al., 1997). More recent evidence suggests that, while there may be some variation across schools, there are hardly any secondary schools where boys make more progress than their female counterparts (Gray et al., 2004). Findings of between-school variation have been challenged by other researchers who have found that the gender gap in achievement is evident in both high- and low-performing schools and that any variation is not attributable to objective school characteristics or within-school practice (Burgess et al., 2004; Tinklin et al., 2001).

The extent to which male and female students select different subjects and courses has also been found to vary from school to school (Lamb, 1996; Daly, 1995; Fitzgibbon, 1999). Schools with otherwise similar characteristics can vary significantly in their provision of particular subjects and in how these subjects are made available to different ability groups and to girls and boys (see, for example, Lee and Smith, 1993; Oakes, 1990). Schools can also influence course take-up indirectly through subject packaging for optional subjects (for example, by asking students to select between 'male' and 'female' subjects) and more subtle encouragement of the take-up of particular types of subjects (Kitchen, 1999; Gillborn, 1990; Nash et al., 1984). In some cases, teachers were seen as discouraging non-gender-traditional choices on the part of students (Gillborn, 1990).

*(ii) The school's role in constructing gender differences*

While some studies have focused on between-school differences in the gender gap, educational researchers have more usually focused on the way in which school climate and process contribute to the emergence of gender differences in educational outcomes. Factors which are seen as significant include teacher expectations and classroom interaction, peer interaction and 'laddishness', along with the complex ways in which the demands of school interact with, and shape, differences in student behaviour. While these factors are seen as taking specific forms in different school contexts, discussions have generally focused on the commonalities across schools in the production and reproduction of gender differences.

Feminist accounts from the 1970s and early 1980s focused on the domination of classroom interaction by boys as a contributory factor in female educational disadvantage (see, for example, Spender, 1982). More recent research has both confirmed and refined these accounts to provide more detailed investigations into the prevalence of different forms of teacher-student interaction, both positive and negative. In whole class settings, boys are seen as contributing more to interaction (for example, by 'calling out' answers) and receiving more feedback from teachers on their contributions (Askew and Ross, 1988; Kelly, 1988; Howe, 1997). This reflects boys' greater willingness to offer comments as well as differential teacher expectations. Similarly, boys tend to dominate in 'hands-on' activities, such as laboratory work and computer sessions, and in the playground (Francis, 2004). However, there is considerable evidence that boys are more disruptive in the classroom and experience more negative interaction with teachers as a result of their



misbehaviour (Francis, 2000; Warrington and Younger, 2000). Indeed, some commentators have suggested that teachers' need to maintain control within the classroom underlies their greater attention to boys' behaviour (Drudy and Uí Catháin, 1999; Younger, 1999). Other researchers have provided a nuanced account of classroom interaction, focusing on the way in which male dominance in classrooms is often accounted for by a minority of boys and the fact that girls may 'outvoice' boys in some settings (Lyons et al., 2003; Francis, 2004). The question arises as to the impact of gendered interaction patterns on academic performance; interaction patterns have remained largely unchanged over a period when significant changes in the gender gap in achievement took place.

More generally, teacher expectations are seen to differ for male and female students. Initially, researchers highlighted lower expectations for girls on the part of teachers (Spender, 1982; Stanworth, 1981). More recently, however, teachers have been found to be likely to identify male students as underachievers. Teachers construct underachievement differentially by gender, emphasising lack of confidence among girls but poor behaviour and motivation among boys (Jones and Myhill, 2004). Studies have differed in whether there is seen to be explicit bias in teacher assessment of male and female students; Lavy (2004) indicates that teacher biases in marking widen the female-male achievement gap across all segments of the ability and performance distribution while Arnot (2002) suggests no evidence of such bias.

Perhaps the most prominent explanation for the underachievement of boys in the current debate, at least in the British context, is a culture of laddishness (see Epstein et al., 1998). Lower academic grades among boys are seen as reflecting a culture of disaffection, poor behaviour, and identification with a masculine identity based on non-school activities, such as sport (see, for example, Mac an Ghaill, 1994; Francis, 2000). For some secondary school boys, laddishness acts as a self-worth protection strategy, protecting their sense of themselves from the possibility of 'failing' academically and from being seen as feminine (Jackson, 2002). Girls and boys experience different peer expectations regarding attainment (Tinklin, 2003). For boys, it is not seen as acceptable to be interested in academic work; they are concerned with preserving an image of reluctant involvement or disengagement (Younger and Warrington, 1996). Male students are more likely than females to say their friends would make fun of them if they work too hard in school (Tinklin et al., 2001). Achievement in itself is not the problem but being seen to be working to achieve is (Epstein, 1998); thus 'effortless achievement' becomes the ideal (Jackson, 2002). In contrast, girls take schoolwork more seriously and traditional gender stereotypes mean that they are more likely to take part in the kinds of cultural activities which help them to succeed at school (Tinklin et al., 2001; Dumais, 2002).

Schools are sites for the construction of masculinity and femininity. These identities are historically and culturally situated and are actively constructed within the school and other social settings (Connell, 2000; Epstein, 1998; Mac an Ghaill, 1994; Lynch and Lodge, 2002). Although the focus has been on male underachievement in many discussions, inequalities in power are still evident within the classroom. Girls act in ways which bolster boys' power at the expense of their

own (Reay, 2001); they both construct themselves and are constructed as feminine. Furthermore, particular subjects areas, such as mathematics and physics, may become constructed as 'masculine', leading to tensions for female students in selecting these subjects and performing well in them (Mendick, 2005).

### *Gender mix within schools*

One of the first major studies of coeducation (Dale, 1969, 1971, 1974) indicated positive developmental outcomes for students in mixed-gender schools without any negative impact on educational outcomes. In contrast, subsequent studies highlighted an advantage to girls attending single-sex schools in terms of their academic grades and the likelihood of studying less 'traditional' subjects. Differences between coeducational and single-sex schools were attributed to male dominance of classroom interaction, teacher attitudes and expectations, peer culture, and different approaches to study among male and female students (see, for example, Spender and Sarah, 1980; Deem, 1984). Technical advances in the field of school effectiveness (using multilevel or hierarchical linear modelling) meant that more precise estimates could be derived of the effects of the school gender mix, over and above those of student background factors. A number of these studies indicated few differences between coeducational and single-sex schools in student outcomes, when comparing 'like with like' (see, for example, Nuttall et al., 1992; Thomas et al., 1994). The debate over the relative merits of coeducation and single-sex schooling has been revived with the introduction of single-sex classes as a way of promoting gender equity in some contexts (see section three).

The assessment of the net impact of single-sex schooling is far from straightforward, however. Firstly, single-sex schooling is comparatively rare in many developed countries, with the result that the small single-sex sector is highly selective, making it difficult to make comparisons with coeducational schools. A US study by Bryk, Lee and Holland (1993), for example, shows that girls in single-sex schools have higher academic performance as well as more positive social and developmental outcomes. However, the fact that their analyses are based solely on the Catholic school sector means that it is difficult to compare 'like with like' in assessing the impact of the school's gender mix and subsequent studies have indicated no significant differences between single-sex and coeducational Catholic schools in achievement, when detailed controls for intake are used (see, for example, LePore and Warren, 1997). Similarly, boys were found to make more progress in language (but not maths) in coeducational classes while girls were found to make more progress in maths (but not language) in single-sex schools in Belgium (Flanders) (van de Gaer et al., 2004; see also van Houtte, 2004). Again, all of the single-sex schools in the sample were in the private sector. A meta-analysis of American (and other international) studies on single-sex schooling has indicated that studies tend to be divided between those indicating positive effects from single-sex schooling and those finding no or only mixed results (Mael et al., 2005). In fact, Riordan (2002) suggests that the positive effects of single-sex schooling are limited to those national educational systems in which the sector is comparatively small.

A number of countries, such as Australia and Ireland, do have a substantial single-sex sector at secondary level. Even in these countries, however, patterns of school choice may mean that single-sex schools are more selective than coeducational schools in terms of the socio economic and 'ability' intake of their students. Controlling for these factors, no significant differences are found in overall exam performance in the Irish context nor does the take-up of scientific or technological subjects vary by the gender mix of the school (Hannan et al., 1996; Smyth and Hannan, 2002; Darmody and Smyth, 2005). Findings from Australian studies have been variable, with some indicating no net differences (Carpenter, 1985; Young, 1994) while others indicated lower take-up, and performance in, mathematical and scientific subjects among girls in coeducational schools (Stables, 1990; Gill, 1992). Controlling for selection processes, one study in New Zealand indicated that children attending single-sex schools tended to perform better than their peers across a range of outcomes (Woodward et al., 1999) while another study found no significant differences in performance for girls (Harker, 2000).

As well as the gender mix of the school, teacher gender has been seen as having a potential role to play in shaping educational outcomes. Recent decades have seen a feminisation of the teaching profession across developed countries, although the degree of feminisation varies from country to country (OECD, 2004). This process has been seen as influential with some commentators attributing the gender differential in attainment to the feminisation of teaching, especially at primary level (Delamont, 1999), and the consequent lack of male role models for boys (Bleach, 1998). However, this claim has not been subject to systematic empirical testing. Furthermore, there is little systematic evidence that the gender of the teacher advantages male or female students more generally (Ehrenberg et al., 1995).

### *Male and female or males and females?*

Some of the discussion of gender differences in educational outcomes appears to posit 'male' and 'female' as the only relevant distinctions. However, a substantial and growing body of research indicates the complex ways in which gender interacts with other factors such as social class background and ethnicity. Indeed, the construction of gender can vary across different groups of girls and boys; there are multiple 'masculinities' and 'femininities' (Connell, 2002). In a study of primary school children, Reay (2001) found that girls took up very varied positions in relation to traditional femininities: 'nice girls', 'girlies', 'spice girls' and 'tomboys' and, as a result, she argued that: "binaries such as male: female, boy: girl often prevents us from seeing the full range of diversity and differentiation existing within one gender as well as between categories of male and female" (p.163). It is important, therefore, to go beyond treating gender as a variable that 'explains' different outcomes and look at how young people construct and enact gender over time (Scott, 2004).

As well as looking at the complex ways in which gender is constructed in the school and other social settings, increased attention has been given to the interaction of gender with ethnicity and social class (Duru-Bellat, 2004). From this perspective,

it is certain groups of boys that perform poorly rather than all boys, indicating the need to move beyond oppositional categories of 'male' and 'female' (Cortis and Neumarch, 2000). Indeed, it has been argued that policy attention to 'failing boys' is somewhat misdirected, given that the scale of gender differences in performance is much less than differences in terms of other social factors such as class and ethnicity (Gillborn and Mirza, 2000; Connolly, 2006). Findings have been inconsistent about the extent to which any 'gender gap' is greater for particular social groups. Some commentators have argued that the gap in performance is greater for working-class than middle-class students (Duru-Bellat, 2004; Arnot and Miles, 2005), others have found little systematic variation across social classes (Connolly, 2006) while Scottish data indicates a gender gap for all except the unskilled working-class (Tinklin et al., 2001). One British study has shown little variation in the size of the gender gap across ethnic groups (Connolly, 2006), although there is some evidence of few or no gender differences in performance among British-Chinese students (Francis and Archer, 2005). In the United States, the gender gap in school engagement is found to be greatest among African-American students, with males experiencing more marked declines in school motivation over time (Roderick, 2003).

In sum, a number of researchers have critiqued the use of the terms 'male' and 'female' as concealing differences among groups of boys and girls. They have stressed the importance of social class and ethnicity as factors shaping educational outcomes and the way in which they interact with gender to produce student identities. The following section considers the different types of policy interventions which have been developed to promote gender equity in recent years.

### POLICY INTERVENTIONS AND GENDER EQUITY

Policies relating to gender equity in education have fallen into four main categories: anti-discrimination legislation, the promotion of participation in non-traditional subject areas, single-sex classes and/or schools, and the development of 'boy-friendly' materials, teaching and assessment methods. Naturally, gender differences in educational outcomes may also be shaped by wider educational reforms not explicitly aimed at promoting gender equity.

A range of legislative measures has prohibited direct discrimination against either gender in educational provision across a number of developed countries. In the United States, Title IX of the Educational Amendments Act of 1972 prohibited sex discrimination in education with subsequent legislation (such as the Women's Education Equity Act 1974) providing resources for promoting gender equity in education. Similarly, the Sex Discrimination Act 1975 in Britain made it unlawful to exclude girls or boys from particular courses. However, it is difficult to disentangle the impact of such legislation from the process of broader social change (Stromquist, 1993) and, as the research outlined above has indicated, gendered outcomes more often reflect subtle processes rather than overt discrimination.

A second set of measures has related to promoting non-gender-stereotyped course take-up. These have generally focused on the spheres of science and

technology, including initiatives such as the Girls into Science and Technology (GIST) project in Britain (Myers, 2000). Such interventions have had varying degrees of success (Kelly, 1985; ETAN Expert Working Group on Women and Science, 2000). The experience of the Girls into Science and Technology (GIST) project indicated that students in the intervention schools became less gender-stereotyped in their views and more willing to accept women in non-traditional jobs; however, their own subject and career choices did not change substantially (Kelly, 1988). Some measures have focused on the provision of 'girl-friendly' information on the content of non-traditional subjects and the careers to which these subjects will lead. However, many commentators emphasise that information alone is insufficient without a multidimensional approach to subject and career guidance, including the promotion of self-esteem, support from teachers and peers, female role models and improved guidance (Read, 1994; McKinnon and Ahola-Sidaway, 1995; Silverman and Pritchard, 1996; Cockburn, 1987).

Teaching students within single-sex classes within mixed-sex schools has recently emerged as a strategy to combat male underachievement and/or to encourage girls' confidence in particular subject areas (Datnow and Hubbard, 2002; Younger et al., 2005). Results from these interventions have been inconclusive. A study of all-female computer science classes revealed positive effects on achievement (Crombie et al., 2002) as did single-sex physics classes for girls (Gillibrand et al., 1999). However, some studies of single-sex mathematics classes indicated no significant effects for either boys or girls (Marsh and Rowe, 1996; Dunlap, 2002; Gilson, 2002). Jackson (2002) argues that single-sex classes do not challenge macho culture unless they are accompanied by more fundamental changes in the curriculum and teaching methods. Indeed, many of the successful examples of single-sex classes have taken place within an overall context of school improvement measures, making it difficult to disentangle the potential causal impact of adopting single-sex education on a wider scale (Herr and Arms, 2002).

A fourth set of measures has related to the development of 'boy-friendly' learning materials along with teaching and assessment methods. The Success for Boys initiative in Australia (2005-8) has provided grants for professional development and related activities to cover the development of modules on boys' literacy along with other activities such as mentoring ([www.dest.gov.au](http://www.dest.gov.au)). The Raising Boys' Achievement project in Britain involved action research with fifty schools for a four year period (Younger et al., 2005). The kind of intervention strategies varied across schools, encompassing pedagogic, individual, organisational and socio-cultural changes, with an emphasis on the diffusion of existing 'successful' practices. They found no case for 'boy-friendly' pedagogies (since quality teaching will engage both boys and girls) but many other initiatives were seen as potentially successful, depending on the school context. Other commentators have argued that the key to raising boys' achievement lies in more general school improvement measures. Thus, improving teaching and school climate will have positive effects for both boys and girls (Lingard et al., 2004). Similarly, Gray et al. (2004) indicate that the schools with the greatest gender gap in progress may in fact

be under-performing in general so that focusing on improvement in these schools would have a pay-off for male underachievement.

In summary, a range of measures has been adopted in developed countries to promote gender equity. Over time, the focus has shifted somewhat from encouraging girls to take up traditionally 'male' subjects towards a concern with male underachievement. Few of these initiatives have been subject to systematic evaluation but it would seem to be unlikely that they will be wholly successful unless underpinned by more fundamental change in the school and wider society.

## CONCLUSIONS

Recent decades have seen female educational attainment and achievement levels equal, or surpass, those of their male counterparts in many developed countries. In spite of these changes, persistent gender differences are evident in the kinds of subjects and courses taken by young women and men within secondary and tertiary education. This chapter has outlined some of the main explanations advanced for these patterns. Gender differences in educational achievement have been attributed to broader social and labour market factors, the approach taken to student assessment, the feminisation of teaching, the pattern of classroom interaction, the 'laddish' culture among boys and the gender mix of the school. Gender differences in field of study have been variously attributed to biological factors, gender segregation within the labour market, the nature of the educational system, whether the school is coeducational or single-sex, and the construction of particular spheres of knowledge as 'male' or 'female'.

While considerable advances have been made in our understanding of the processes shaping gender differentiation in educational outcomes, two areas would appear to provide fruitful directions for future research. Firstly, although some commentators posit a near-universality in gender differences, it is clear that there is cross-national variation in the kind of subjects taken by young women and men and in how they fare in examinations. To date, however, few attempts have been made to explore the way in which different educational systems can impact on these patterns. Secondly, there would appear to be scope for achieving greater insight into the dynamics of social and educational change. This would require more detailed accounts of the way in which some fields of study have become feminised over time and of the processes shaping the emergence of any 'gender gap' in achievement. Some accounts of gender and education can tend to a post-hoc explanation of differences; for example, boys' dominance of classroom interaction was used as an explanation for female educational disadvantage at an earlier time-point but this pattern is still evident within classrooms even though the policy focus is now on male underachievement. Greater attention to variation in gender differences in educational outcomes across societies and over time would build upon the valuable work carried out to date on the construction of gender in specific social settings.

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# 7 Education Equality Indicators in the Nations of the European Union<sup>\*</sup>

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## INTRODUCTION

This chapter presents the theoretical framework, methodology and some findings of a research program conducted for the Commission of the European Union by an interdisciplinary team of researchers under the name of GERESE (*Group Européen de Recherche sur l'Équité des Systèmes Éducatifs*). This team was made up of academics from six countries (UK, Belgium, France, Switzerland, Italy and Spain) and coordinated by Marc Demeuse from the *Service de Pédagogie Théorique et Expérimentale* of the University of Liège. The program's aim was to construct a series of indicators of equity in European Union education systems, to accompany indicators of quality already in use, as a result of international comparative work conducted by the OECD-CERI for some years. The GERESE project was related to an earlier study conducted by an *ad hoc* working group of the OECD, comprising several of the current researchers who had framed an early draft of the matrix of indicators as well as a series of theoretical and empirical discussions (see Hutmacher, Cochrane and Bottani, 2001).

This chapter also asks what the concept of equity adds to traditional approaches used in educational sociology, which are based on concepts of equality and inequality. It further examines the various equity theories which a pluralistic system of indicators like those of GERESE has to take into account; the theoretical principles which inform the matrix constructed in this project; the principal sources and methodologies used; and some comparative findings relating to the equity question, considered in relation to both the acquisition of basic competencies and academic progression (student's career within an educational system). The approach of the GERESE report (2005), in line with the Commission's requirements, is essentially descriptive and evaluative, as is the approach adopted in this chapter. Nevertheless, the second part of this chapter, which reports some of the empirical findings, will venture beyond the scope of the report and advance some analyses and proposals of a more explanatory and interpretative nature, engaging with theoretical models and empirical evidence generated by sociological research into educational inequality.

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<sup>\*</sup> Translated from the Italian by John Polese

## EQUITY AND INEQUALITY

*The theoretical and methodological framework of the GERESE project*

Sociology has always engaged with the issue of equality, but recently a new concept, equity, has entered the debates on social and educational policy, often replacing that of equality. How does equity differ from equality and what is the significance of the semantic slide from one to the other? Some see this change as evidence of a progressive repudiation of the egalitarian ideals of the 1960s and 1970s, evidenced in the last twenty years in Western nations and propelled by right-wing radicals and neo-conservatives. This, however, is not a common view. The emergence of the public debate regarding equity may be seen rather as an attempt to re-establish the very issue of inequality in the public policy agenda, thus putting an end to the decline it had undergone in economically advanced nations since the 1980s, when other “reference points” — effectiveness, efficiency, quality — entered the field and dominated the debates between experts and policy makers.

With the term equity arose an understanding that it was necessary not just to define but also to relativise and render more problematic concepts such as equality, which in the past had often been treated as a given: simple, well-defined and uncontroversial, and easily measured by social scientists. The concept of equality had in some ways become reified, treated as a natural phenomenon, which had only to be measured. Even the sociology of inequality, notwithstanding some diversity of views, failed to recognise sufficiently that equality and inequality were social constructs. Clearly there had emerged a need for more sophisticated technical discussions on ways of measuring inequality. But foremost was a need to define inequality, taking into account theories initially used in the field of political philosophy. There had also emerged a need to consider the different ethical and political beliefs and material interests of the relevant social actors. What seems to be required from sociological research is not just the operationalisation of one definition of inequality — as if there were only one valid definition — but an engagement with a range of definitions with which to measure and analyse inequality. Alternatively, a more subjective approach might be to examine the concepts in play in the social construction of the idea of equality. Who are the actors involved and what are the contextual factors which influence the adoption of one or another conceptualisation? Implicit in these views is the understanding that research into inequality must proceed in parallel with another strand of sociological research from which it has previously been isolated, that of values, or rather more precisely that of the feelings and attitudes of the social actors towards justice. A good example of such an approach may be seen in Dubet’s recent book on injustices in workplace contexts (2006). In the GERESE project, there was an attempt to establish a nexus between objective and subjective approaches to the theme of inequality by means of a pilot study investigating the feelings and attitudes of 14-15 year-old students in Madrid, Rome, Paris, Brussels and the French-speaking community of Belgium, and Cardiff and the rest of Wales towards justice and injustice in schools. A broader

survey with national samples in five European countries is now being conducted, involving for the most part the same research group.

But linking the question of inequality to the question of justice more explicitly and in a problematised manner requires another no less promising operation in cross-fertilisation. That is, it requires us to link sociological theory and research to the debate which has emerged on this question in recent decades between political philosophers (as well as economists and more recently sociologists, too) since the publication of *A Theory of Justice* (Rawls, 1971). I would argue for two reasons relating both to the objective and to the subjective sides of the issue discussed above that both should be present in sociological research into inequality. The first reason is that the sociologist more or less explicitly uses a “conceptuology” in the argument regarding equality and justice — or “a just equality” as we might call it — which has everything to gain in richness of meaning and analytical coherence from passing through the filter of engagement with the categories devised by political philosophers. The second is that, to a sociologist more than nearly anyone else, it becomes evident that philosophical reflection does not happen in a separate, sterile world interwoven with speculative ideals, but develops through a constant two-way relationship with “popular philosophy”, that is, with the beliefs which social actors construct and carry, in this case those relating to a just equality in education. It follows that it is in the interests of empirical sociological research into such beliefs and their formation not to ignore the debate now occurring within political philosophy.

### *Equality yes, but equality of what?*

One of the most interesting issues arising from this debate, and one which helps us understand why equity is now on the agenda, is the relativisation of the concept of equality. “Equality, yes, but equality of what?” the economics philosopher, Amartya Sen (1992), asked a few years ago, observing that equality in one respect demands inequality in others. It follows that, for the philosopher, as well as for the social actor, the problem arises of choosing where equality should be mandated and where inequality should be legitimised or at least tolerated, within some kind of theoretical framework of justice or equity. What then is *a just equality*, which we assume is synonymous with equity?

Rawls argues that a fair distribution of those goods which are important to society (“primary goods”) is that which allows or encourages social cooperation between subjects of comparable dignity. He adds that such a distribution must conform with the principle of equality, except when it mainly benefits the most disadvantaged subjects. The American philosopher does not explicitly include education among his primary goods, nor does he concern himself systematically with the rules of justice relating specifically to education. There are a few authors who have tried to do so on the basis of an interpretation of his theory (see, for example, Meuret, 1999), and the GERESE project was also set up within this theoretical framework, making an initial attempt to translate the principle of “advantage for the disadvantaged” (or the “principle of difference”, as Rawls calls

it) into a range of relevant statistical indicators. This is a first step in defining equity in terms of a just equality and a just inequality.

Various questions remain open, however, as to what constitutes equality in the distribution of educational goods, since the various answers give rise to as many possible definitions of the concept of equity. In the end, what is it that needs to be equalised? Is it the results, that is, the final outcome of the process of teaching and learning, or simply the process, the teaching and other instrumental goods or services conferred by education systems? It is likely that to obtain equality of outcomes, either in terms of students' careers and/or learnt competencies, it may not be enough to eliminate disparities in process which nearly always consist of better schools for the students who are socially and academically advantaged. There may also be a need to adopt a policy of 'positive discrimination' — better schools for disadvantaged students — which is clearly in conflict with the principle of equal process or equal treatment.

It would be better then to view equity as comprising "a just equality" in terms of final outcomes and "a just inequality" in terms of process. In the GERSE project, both these perspectives — outcomes and processes — were taken into consideration in the construction of the equity indicators.

#### *Equality, yes, but amongst whom?*

A second and more complex question relates to defining the beneficiaries of distributive equality. We might ask: equality, yes, but amongst whom? Should equality, in particular that of outcomes, be seen as equality between individual students only? Or should it apply uniquely to categories of students, differentiated on the basis of ascriptive criteria such as social background, gender, nationality, geographical area of residence, ethnicity and therefore relate only to average individuals within each of the categories under investigation? Sociologists of education and many philosophers, including Walzer (1983) and Rawls himself, have usually favoured this latter interpretation, which is normally designated "social equality of educational opportunity". Rawls' second rule of justice as equity is the so-called "liberal equality of opportunity", which he couples with the "principle of difference", though at a higher conceptual level. Undeniably we are dealing with a concept endowed with considerable force, arising from its capacity to bring together two perspectives, which are normally contradictory: the egalitarian and the meritocratic (Dubet, 2004). Even among the students involved in our survey on feelings and attitudes towards justice, a large majority were in favour of such a definition of the "fair school"<sup>1</sup>.

With respect to this, it is worth considering here some questions regarding merit as a criterion of educational justice. The concept of merit, in its double meaning of talent and effort, has been at the centre of normative debates on education since the

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<sup>1</sup> 53% of students interviewed prioritised this concept, 37% that of minimum threshold, 10% that of limiting inter-individual disparities. These last two concepts will be dealt with further on.



beginning of modernity, but with illustrious precedents even in classical philosophy. And functionalist sociology, which is inspired by the Parsonian dichotomy between ascription and achievement as individual attributes, has drawn on the concept to build its own fundamental theoretical construct from which most ensuing studies into educational inequality, including those of a non-functionalist nature, have not substantially departed. Walzer, in his philosophical theory of the plurality of the spheres of justice in a complex society, recognises in merit — which he sees as an “appropriate criterion” of selection — the specific and distinctive regulatory principle of education. To respond to the question of “equality, but amongst whom?” one can then say that adhering to the principle of merit means affirming the axiom “to equal merit, equal reward”. Reward in this case, of course, is used to signify both process and outcome, even though these two meanings are potentially contradictory.

Further, the concept of merit, like that of equality, has uncertain boundaries and is susceptible to different interpretations. One can distinguish at least four variants of the meritocratic conception of equity in education (Benadusi, 2001). The first, which is the most inegalitarian, is that held by psychologists with a genetic view (see, for a recent study, Herrnstein and Murray, 1994). According to this view, individual talent depends primarily on biological heredity, with only limited influence attributed to the social environment in which young people are raised. Corresponding to this view at the level of “popular theory” is the idea that a school capable of recognising, valuing and rewarding talent — e.g., in how students are assigned to different courses of study — should be considered substantially equitable, even if this results in high levels of selectivity and marked inequality in process and, above all, outcomes.

By contrast, a second version — the most egalitarian — attributes the greatest importance to social factors and assumes that, at least as far as educational inequalities between social classes or strata are concerned, these are uniquely related to the relative quality of the processes of primary socialisation or to the socially discriminatory characteristics of educational institutions which privilege the culture of certain social groups, while rejecting and therefore stigmatising that of others. From this, it is axiomatic that an equitable, but also meritocratic school is one which equalises the average results obtained by students belonging to those different social categories. This concept of equality of educational opportunity is precisely the one encountered in most sociological studies.

The other two versions of this concept fall between the first two, in that they seek to distinguish between merit that is “deserved” (attributable to the student) and merit that is “not deserved” because it is generated externally. However, each version does this in a different way. The third approach distinguishes between talent attributable to genetic factors and talent attributable to social factors. This assumes that the genetic side is intrinsic to the individual and therefore a legitimate source of inequality, while the social side is by contrast extrinsic and therefore an ethically unacceptable cause of inequality. This is similar to the arguments of those supporting the second version of the concept, with the crucial difference that in this case it is accepted that even differences between social groups can be partially sourced to genetic factors or disparities in intelligence dating back to birth. The

separation between genetic and environmental factors is the view chosen by many philosophers, partly by Rawls himself in his formulation of the principle of “liberal equality of opportunity”. However, even if we admit that this is theoretically plausible, this approach is not easily operationalised for the purpose of empirical research. It is also for this reason that, with the exception of a few attempts to introduce the variable of “natural gifts” into statistical models by means of IQ (see, for example, Halsey, Heath and Ridge, 1980), sociologists have opted for a definition of the concept of equality of educational opportunity which conforms not to this, but to the second version of merit, the one most closely aligned to the egalitarian view<sup>2</sup>.

The fourth version of the meritocratic principle as suggested by those who uphold the so-called “theory of responsibility” (Arneson, 1989; Roemer, 1996) is also difficult to operationalise. According to this version, individuals are not responsible for their talent, whether determined by genetic *or* social factors. It is their effort, rather, which should be rewarded proportionally, in the context of their results in the educational process. From this arises the need for a distribution of resources which compensates for differences in talent, so that only individual effort in learning is the source of inequalities in outcomes. The analytical separation between talent and effort, whether or not valid in theory, presents significant difficulties in application as far as research is concerned, with a dearth of data upon which to construct indicators, particularly comparative indicators at an international level.

In the GERESE project we have accepted the second version of the meritocratic principle (the most egalitarian one) as the most convincing and have therefore included equality of opportunity between groups as one of the fundamental indicators of equity in education. We have done so with reference to three important ascriptive categories: class or social status, gender and nationality (citizen/foreigner). Moreover, it did not seem appropriate to ignore in the formulation of the list of indicators the broader response to the question “amongst whom?” This includes not only disparities between groups, but also between individuals within groups. In this case it should be understood that we do not believe equity as a principle requires absolute equality of results — an idea which no longer attracts followers either in theory or in “popular philosophy” — but rather that too great a disparity in knowledge or in individual competencies, even if this does not arise from ascriptive factors relating to the social origins of students, should be avoided for a number of other reasons. Namely, they can have a negative impact upon the operation of democratic processes and upon social cohesion and cooperation. And following from this, they can therefore be more easily reproduced in succeeding generations, thus consolidating inequality of opportunity between social groups.

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2 In this way, sociologists of education have taken for granted that genetic factors have an influence only on inter-individual inequalities and not on inter-group ones, or that their influence is unimportant in that inter-individual inequalities can be mainly put down to “voluntaristic” or casual factors.

Using the same logic, it was decided to add to our list some threshold indicators relating to minimum levels of formal scholastic achievement (years of study completed or qualifications attained) and of effective learning (basic competencies acquired). It would be fair for all students to reach such levels, given that this is an important prerequisite of the individual's autonomy and active citizenship. These are indicators that reflect a concept of justice widely accepted within our societies, not only with regard to education, e.g., the guaranteed minimum wage. This is an equity criterion which relates to "social rights of citizenship" or basic "human rights" and which shows an affinity with some important normative theories which have emerged in recent decades, in particular Dworkin's (1981) concept of "equality of resources" and Sen's (1992) "equality of capabilities" — the capacity of everyone to realise their full potential. One of the threshold indicators in the GERESE project is actually Sen's index of poverty, in this case modified to educational poverty.

Other responses to the question as to which inequalities are either fair or unfair can be traced to theories arising from current neo-utilitarian and libertarian philosophies. For the neo-utilitarians, the fundamental regulatory principle relating to the distribution of resources is maximising aggregate utility, that is, the sum of the utilities received (or believed to be received) by individuals. From this it follows that the only ethically acceptable type of equality is that which accords with this principle and which can be seen in the equality of marginal utilities between individuals. Insofar as education is concerned, this general assertion translates into the maxim that those who should receive education in greatest measure are those who can derive the most benefit from it. Such a benefit may be merely psychological, or from an economic rather than philosophical viewpoint, as in human capital theory, where the reference is to future gains for the individual or for society. Human capital theory is in fact quite similar to the first — the most inegalitarian — interpretation of the principle of merit. By contrast, the neo-utilitarian approach, based on a psychological meaning of utility, appears to be quite closely related to the concepts of "client/user satisfaction" and their relative indicators as proposed by the total quality movement. These kinds of normative orientations, while common in academic and public policy debates, have not been taken into account in the formulation of the GERESE project indicators. This is because they were judged to be more in keeping with concepts of effectiveness and efficiency than with equity. Moreover, thanks to OECD studies, they have already generated a significant body of indicators at the international level.

As to normative "libertarian" orientations in the debate between political philosophers, for example those proposed by Nozick (1974), these were considered to be at odds with the concept of equity. Indeed, such views allow only a legalistic or formal definition of a just equality (that of "equality before the law", which includes the criterion of an individual's "fair entitlement"). They also reject any redistribution of goods on *a priori* ethical grounds rather than out of respect for the market.

*Equity as a combination of various criteria of justice and the theoretical canvas of the GERESE project*

The concept of equity allows various definitions of “a just equality”, which, for the reasons indicated by Sen, must always be accompanied by “a just inequality” in other areas. It may also, however, allow a combination of definitions and even some local compromise. Sometimes the combination may be synchronic, while at others it is diachronic because different principles are applied at the different levels of schooling. An example is that of the French economist Trannoy (1999), who has applied the “theory of responsibility” in the educational field, putting into sequence the “principle of compensation” which is needed to reach an equality of “fundamental outcomes” (a minimum threshold of competencies) and that of “natural competition”, the latter conforming to the meritocratic ideal. The matrix of indicators constructed by the GERESE project is also distinguished by its theoretically pluralistic and multi-perspective character. Some indicators are, as in the tradition of sociological research into educational inequality, “objective”, while others, though more limited and experimental, are of a “subjective” nature.

Four concepts of equity in educational outcomes are presented here: a) social equality of opportunity (equality between ascriptive social groups); b) the limiting of inter-individual differences; c) the universal attainment of minimum thresholds; and d) the presence of external educational effects favouring the disadvantaged, amongst whom can be numbered the losers in the educational race. In addition, a fifth concept is presented here, which relates not to outcomes but to processes and the instrumental goods and services whose distribution represents equality of treatment.

A few comments are necessary at this point regarding the overall structure of the matrix, which we have attempted to make consistent with the theoretical framework we have just described, and with the principal sources used in the construction of the indicators.

The horizontal axis of the matrix spells out the first three of the four conceptions of education equity to which we have referred: a) differences between individuals; b) inequalities between groups; c) the proportion of individuals falling below a minimum threshold. The vertical axis has four elements, which comprise: a) the context of educational inequality; b) inequalities of process (or treatment), including the social and academic pupil-mix in schools (level of segregation); c) inequalities relating to internal results (progression and competencies), and; d) inequalities relating to external results, that is the impact of education and educational inequalities on social inequalities (see Table 7.1). As can be seen, the vertical axis also tends to capture aspects which relate to the beginning or end of the educative process, a choice dictated by theoretical considerations which need to be explained.

Table 7.1: Matrix of GERESE Indicators

Criteria/dimensions of equity	Inequality between individuals	Inequality between groups	Proportion of population under minimum threshold
<i>Context</i>			
<i>Process</i>			
<i>Internal results</i>			
<i>External results</i>			

Note: GERESE (2005)

The consideration of context was suggested primarily by the empirical evidence generated by sociological studies into inequality of educational opportunity which have shown that external causes may be even more important than causes relating to the structure and operation of education systems. For example, in the largest international study ever conducted, it was found that external factors, such as social security levels guaranteed by the welfare state and the size of income inequalities, explained the few national exceptions (Sweden and Holland) to observed persistent patterns of inequality over time (Shavit and Blossfeld, 1993). It was beyond the scope of the GERESE study to conduct a separate study of an interpretative nature into differences in inequality between European nations. However, even from a fundamentally evaluative viewpoint, as is the case in this project, it was significant that aspects of the education system, education policy and social context were regarded as playing a role in the creation of inequality. In fact, from our point of view, although characterised by the same level of inequality as some others, national educational systems should be considered less equitable if the causes of inequality are internal rather than external. For this reason indicators designed to measure at least some of the external causes were introduced.

There is a second evaluative reason for taking context into account. Referring again to levels of inequality, context may well tell us more about equity in countries where education has a relatively bigger “pay-off” in terms of its influence on income, on social status and on individual well-being. A few sociological studies have observed that social equality in education is stronger in countries where credentialism, that is the value of qualifications in the labour market, is weaker, so that privileged groups are less interested in the game of education. Some support for this argument comes from the results of a major comparative study conducted by Muller and Shavit (1998). Once again, national educational systems with a bigger “pay-off” should be deemed less equitable than others with a lesser one, even if they are characterised by the same level of inequality.

The external effects of education systems are also important in the fourth vertical cell of the matrix and under other profiles. One of the profiles relates to a criterion of equity present in the philosophical debate (and assumed in the GERESE project) which brings us back to the Rawlsian principle of “advantage for the

disadvantaged". Despite the theoretical difficulties involved, an attempt was made to understand whether the impact of educational inequalities on social inequalities conformed to this principle. Relevant indicators used to achieve this were measures of redistribution of benefits (social transfers), the level of residential segregation between social groups, and the prevalence of behaviour and attitudes among highly-educated members of society driven by social solidarity. The impact of education on levels of tolerance or intolerance towards the "others", for example immigrants, may be considered as belonging to this group of indicators.

Another profile has to do with the processes of social mobility and the acquisition of employment status (status attainment). A country where social origins have a stronger effect on transition to work and type of initial employment can be considered more inequitable than another, from the viewpoint of equal occupational opportunity. But, from the point of view of educational equity, it is important to consider how much this conditioning arises from the direct impact of young people's parental social or educational status and how much through the operation of social inequalities of opportunity within their current educational career. The same issue of balance between internal and external factors, which were referred to earlier, enters into play here. One can see then that, like the global influence of social origins, there is less educational equity where such an influence is principally mediated through the education system. Furthermore, one can say that education is more inequitable when it adds its indirect effects to the direct reproductive effects of social origins, instead of compensating for them.

### *Sources and methods*

With regard to the source used to construct the indicators included in the GERESE project, and the methodology employed, it should be said that with the exception of the quick survey on students, existing data sources and secondary analysis of relevant data were the main methods. Various international databases of an institutional kind were used, such as those from OECD and Eurostat, together with those generated by research conducted by consortiums, such as the World and European Values Survey; sometimes, analyses conducted by single groups of researchers were utilised. The most interesting aspect, as it represents a new approach in the field of sociological research in this area, is the extensive use of PISA data from its first phase (OECD, 2001, 2003), particularly, though not exclusively, that part relating to test results of 15-year-olds in reading, mathematics and science. This is a very valuable source in that it comprises a large number of nations including the more important European ones. It is also based on an accurately standardised data collection process and is linked to demographic data essential for an analysis of inequality. Without downplaying the methodological debates regarding the measures used and issues of comparability, we argue that PISA, now in its second phase (OECD 2005), is a very useful source of data. This is partly because it allows us to add substantial measures relating to learning outcomes and competencies acquired by young people during the course of their studies to the usual measures of inequality, which are by nature more formal because they pertain

to academic progression. In the light of the growing phenomenon of credential inflation, it is reasonable to believe that these types of hard data will acquire a growing importance in the processes of social selection, the employment pathways of individuals and the relative prestige of educational institutions. It is no accident, after all, that several sociologists interested in educational inequality have recently accessed a secondary analysis of PISA data (see, for example, Duru-Bellat, Mons and Suchaut, 2003; Esping-Andersen and Mestres, 2003).

## SOME FINDINGS OF THE GERESE PROJECT

### *Equity of internal results*

In this section, we will illustrate the findings of the GERESE project relating to one of the four vertical sections: equity of internal results. As stated, equity of internal results was measured in relation to: a) disparities between individuals; b) inequality between social groups; and c) the proportion of respondents below a minimum threshold. Most of the indicators used were derived from the PISA 2000 tests and therefore relate to competencies acquired, defined here as the averages of the scores achieved by 15-year-old respondents in the three competencies tested (reading, maths and science). These scores, as we have previously noted, are highly correlated. Other indicators relate to academic progression and were derived from various sources, above all the official statistics of the European Union.

Table 2, drawn from GERESE, includes eight indicators. The first two, inherent to dimension a), relate to competency and to progression. In column 1 we have put the standard deviation (S.D.) of PISA scores, a classic tool for measuring the dispersion of a variable. Column 2 contains the percentage of adults aged 25-34 outside the modal school qualification band (for example, holders of a diploma at upper secondary level). This is a tool for measuring individual variability in school careers.

This is followed by three indicators of competencies inherent to dimension b): differences in achievement, that is, the variance in PISA scores imputable to parental SES (socioeconomic status) (more precisely, SES of the most educated parent) (column 3), nationality of parents (column 4) and gender (column 5).

Finally, the last three indicators which are related to dimension c) measure competencies (the first two) and progression (the third). In column 6 we find the percentage of students tested in PISA 2000 who achieved low scores (those under level 2 according to the OECD classification), which may be considered a level of competency insufficient for a full participation in social, economic and cultural life in developed countries. In column 7 another, more sophisticated, measure of educational poverty is presented: the Sen Index adapted by GERESE to the educational field. It is composed of three different elements: the percentage of students with scores below the minimum threshold, the distance between the mean scores of these students and the same threshold, and the dispersion of scores among the students below this minimum threshold. Column 8 contains the percentage of the

population aged 25-34 without an upper secondary qualification, a level of school career considered as another relevant threshold.

Table 2 comprises the fifteen original member states of the EU plus Switzerland and Norway, as in the majority of our analyses.

Two general observations may be made. The first is that many of the eight indicators show the existence of relevant, though more or less strong, inequities, whether these are between individuals, between groups or in the failure to achieve minimum thresholds. The only exceptions are the indicator of inequality in competencies by gender (column 5) and for some nations, the indicator of inequality by parents' nationality (column 4).

The second statement relates to differences between nations which for many indicators are markedly high, namely those relating to inequalities of results in competencies by parental SES (column 3) and by nationality (column 4), as well as the first two concerning the proportion of respondents below the minimum competency threshold (columns 6 and 7), and also the two regarding academic progression (columns 2 and 8).

We must now ask whether and to what extent the different forms of inequality and their related indicators are mutually dependent or independent. Table 7.3 shows the correlations between the most revealing indicators.

Strong correlations occur, to varying degrees, among many PISA learning indicators. Apart from that between indicators 6 and 7, which is obviously due to their marked similarity, the most important correlations are those of indicator 1 with both indicators 3 (differences in learning by parental SES) and 6 (percentage of students with low scores). Indicator 3, in turn, shows a relevant inverse correlation with indicator 5 (differences in learning by gender); furthermore, indicator 4 (differences in learning by parents' nationality) is significantly correlated with indicator 8 (per cent of the population without an upper secondary qualification). However, the last two correlations are both difficult to interpret.

Much weaker are the correlations between the indicators of learning competencies and those relating to progression, even when they can be attributed to the same category (in this table, the disparities between individuals and the proportion of respondents under the minimum threshold). It can be added that not even the two indicators relating to progression are correlated significantly.

To summarise, what is apparent on the one hand is a substantial heterogeneity of measures when we look at the competency/progression divide. This is a point we will come back to when we examine the indicators of social inequality of opportunity in terms of progression (not included in Tables 7.1 and 7.2 because they are available only for a more limited number of countries). On the other hand, a substantial degree of homogeneity is observed when the more important indicators related to competencies are examined through all three dimensions of equity. This homogeneity, however, does not annul the single indicators' specificity.



Table 7.2: Measures of Equity/Inequity of Internal Results (in Reading, Maths and Science)

	1	2	3	4	5	6	7	8
	Standard deviation of PISA scores	% of adults aged 25-34 outside the modal qualification band	Differences in learning by SES background	Differences in learning by parents' nationality	Differences in learning by gender	% of students with low scores	Sen Index	% of population aged 25-34 without a secondary qualification
<i>Belgium</i>	104.90	60.87	0.98	0.62	0.09	19.0	1.25	27.00
<i>Denmark</i>	95.39	41.41	0.80	0.38	0.01	17.9	0.81	12.78
<i>Germany</i>	101.04	36.37	0.98	0.55	0.07	22.6	1.91	14.82
<i>Greece</i>	99.50	53.99	0.71	0.21	0.12	24.4	1.61	28.84
<i>Spain</i>	91.64	54.52	0.70	0.25	0.03	16.3	1.11	45.48
<i>France</i>	96.22	54.55	0.85	0.31	0.05	15.2	1.23	23.63
<i>Ireland</i>	90.04	62.76	0.74	-0.16	0.07	11.0	1.23	33.30
<i>Italy</i>	93.76	54.55	0.62	-0.06	0.13	18.9	2.28	44.55
<i>Luxembourg</i>	100.15	60.21	0.90	0.52	0.08	35.1	1.67	39.00
<i>Netherlands</i>	91.64	51.13	0.81	0.71	0.07	-	1.15	26.00
<i>Austria</i>	94.90	29.37	0.65	0.53	0.04	14.6	1.18	16.82
<i>Portugal</i>	92.31	30.48	0.91	-0.07	0.04	26.3	1.56	69.52
<i>Finland</i>	87.14	51.86	0.54	0.26	0.20	6.9	0.76	14.41
<i>Sweden</i>	94.02	44.70	0.71	0.32	0.11	12.6	0.85	12.96
<i>United Kingdom</i>	97.47	61.35	0.93	0.09	0.05	12.8	0.79	34.09
<i>Norway</i>	98.01	38.89	0.61	0.37	0.12	20.3	1.16	6.08
<i>Switzerland</i>	97.57	37.16	0.93	0.52	0.04	17.5	1.05	11.24
<i>Mean</i>	95.63	48.48	0.79	0.31	0.08	18.21	1.27	27.09

Note: Source Gerese (2000).

Table 7.3: Matrix of Correlations Bravais – Pearson between the Internal Results Indicator (8x8)

	1	2	3	4	5	6	7	8
Standard deviation of PISA scores	1	% of adults aged 25-34 outside the modal qualification band	Differences in learning by SES background	Differences in learning by parents' nationality	Differences in learning by gender	% of students with low scores	Sen Index	% of population aged 25-34 without a secondary qualification
<i>S.d. Pisa Scores</i>	1	0.042	0.601*	0.463	-0.164	0.540*	0.286	-0.184
<i>% of adults aged 25-34 outside the modal qualification band</i>	0.042	1	0.036	-0.208	0.250	-0.098	-0.006	0.208
<i>Differences in learning by SES background</i>	0.601*	0.036	1	0.284	-0.557*	0.421	0.108	0.191
<i>Differences in learning by parents' nationality</i>	0.463	-0.208	0.284	1	-0.113	0.199	-0.168	-0.557*
<i>Differences in learning by gender</i>	-0.164	0.250	-0.557*	-0.113	1	-0.185	0.120	-0.201
<i>% of students with low scores</i>	0.540*	0.098	0.421	0.199	-0.185	1	0.610**	0.377
<i>Sen Index</i>	0.286	-0.006	0.108	-0.168	0.120	0.610**	1	0.434
<i>% of population aged 25-34 without a secondary qualification</i>	-0.184	0.208	0.191	-0.557*	-0.201	0.377	0.434	1

Note: Source our Gerese (2005) analysis of PISA 2000 data.

\* Correlation is significant at the 0.05 level;

\*\* Correlation is significant at the 0.01 level

*Inequalities relating to competencies*

We move on now to a detailed analysis of differences in the competency outcomes. These are set out in Table 7.2. Column 1 reports the distribution of scores obtained by individuals for the three competencies tested by PISA 2000 (reading, mathematics, science), and relates to the first of the three aspects of equity which form the vertical axis of the GERESE matrix. This shows that Belgium, Germany, Luxembourg and Greece have the greatest disparities, while Finland, Ireland, Holland and Spain have the smallest. Among the nations in the middle, Portugal, Italy, Sweden and Austria are closer to the second group, while the UK, Switzerland and Norway are closer to the first, and Austria, Denmark and France are equidistant from the two. The mean international standard deviation (95.63) is high, which shows that overall between-individual differences are high.<sup>3</sup>

We have already noted the significant correlations between this indicator and others relating to competencies. It is interesting here also to observe the relationship between standard deviation and mean results for each individual nation and then to test the proposition, often advanced by economists, of a trade-off between equality (as between individuals) and effectiveness, as measured by mean results. In the following figure the various nations are plotted on a two-dimensional plane representing average scores and level of dispersion within each nation.

As we can see by the clustering within quadrants, some of the most homogeneous nations (Finland, Ireland, Holland and Sweden) are numbered among the highest performing, while others have low to average/low performance (Spain, Portugal, Italy). As to the more heterogeneous group, some are low performing nations (Greece, Germany, Luxembourg), while others have high levels of performance (Belgium) or average/high performance (Norway, Switzerland, UK). Denmark, Austria and France cluster around the average on both measures. In summary, the evidence regarding the relationship between effectiveness and equity is somewhat contradictory and overall there is a very weak negative correlation (-0.31) between heterogeneity and performance rather than a positive and significant one, as might be expected if the proposition above were true. On the other hand, where disparities are limited, this seems to occur in two different ways. For some nations in northern Europe (Finland, Sweden, Ireland, Holland), it tends to be associated with above-average levels of achievement; in southern Europe (Spain, Italy, Portugal), it is associated with a tendency towards lower levels of achievement.

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3 The mean standard deviation is higher than is found in two of the five levels into which the score tables have been divided. However, in some countries, domestic variations (for example, by region), are greater than those measured using the mean standard deviation.

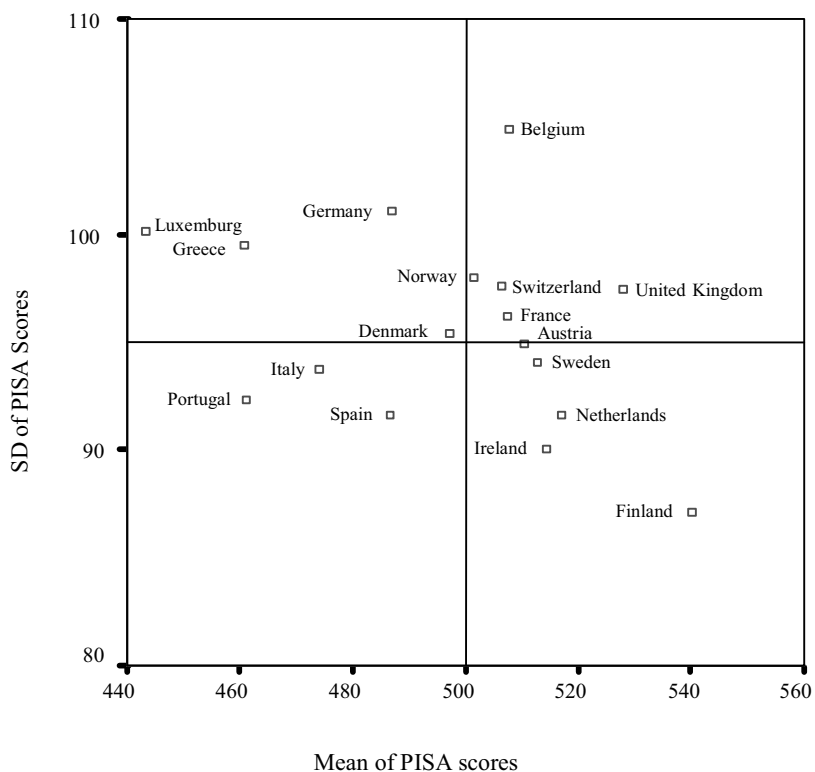


Figure 7.1: Dispersion of the National Means of PISA Scores ( in Reading, Maths & Science) and their Standard Deviations

Notes: Correlation value: -0.31

Source: our analysis of PISA 2000 data

#### *The proportion of the population below the minimum threshold*

A grouping similar in some ways and different in others can be seen in the indicators that relate to the third dimension of equity: the proportion of results below the minimum threshold (see Figure 7.2). If we take the sixth column of Table 7.2 (proportion of respondents with very weak results) or the seventh column (the more complex Sen Index), we find the highest proportions of respondents in the three southern European nations (Italy, Greece and Portugal) together with Germany, Luxemburg, Belgium and Norway. Among the more equitable countries are again Finland, Holland and Sweden, joined here by the United Kingdom. We must bear in

mind that, in general, the value of the correlation between this indicator of equity and that shown in the first column of Table 7.1 is significant and moderately high (0.540).

As to the relationship between this equity indicator and our indicator of effectiveness, we can observe that the less equitable nations are mainly characterised by markedly low performance (with the exception of Belgium, Norway and to an extent Germany). On the other hand, the nations with a low proportion of respondents below the threshold can boast amongst the highest results compared with those of the previous group. So, in general, there is a very strong negative correlation between this threshold indicator and average performance (0.92). This is much stronger than all the correlations shown in Figure 7.1. We can conclude, then, that this view of equity is not inconsistent with effectiveness as some have argued but rather very clearly correlates with it.

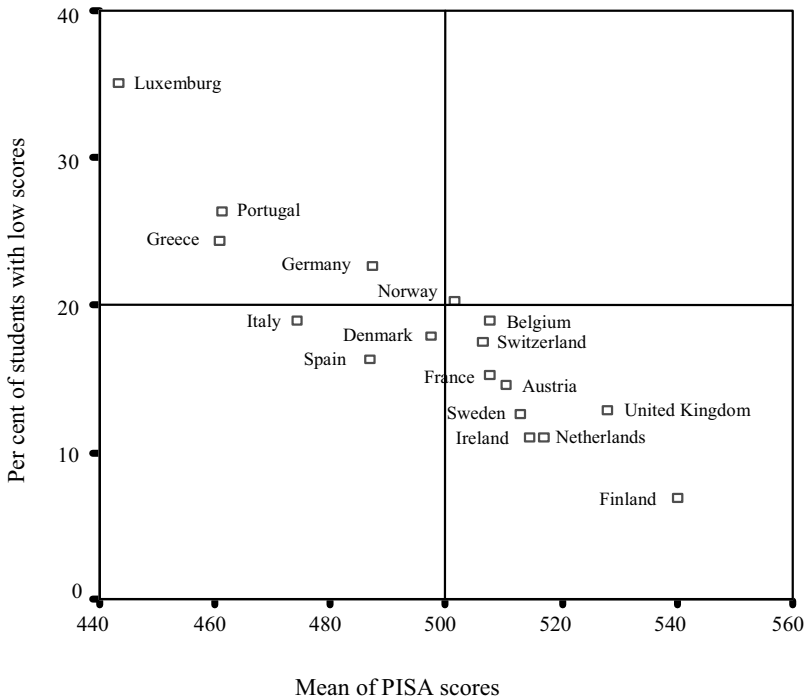


Figure 7.2: Dispersion Diagram Between Percentage of Scores below Minimum Threshold & Average Scores

Notes: Value of correlation: -0.92  
 Source: our analysis of PISA 2000 data

This argument can be taken further. If, as in the GERESE project, we devise an indicator of excellence (per cent in the highest achievement band) as well as an indicator of weakness, we find these two measures are strongly correlated, though inversely ( $-0.80$ ) (see Figure 7.3). In fact, with few exceptions — the upper right hand quadrant and the lower left hand quadrant are almost empty — the nations with the highest index of failure are also those with the lowest levels of excellence. This shows that equity, as defined here, is not only ‘consistent’ with effectiveness, it is also consistent with excellence, which can be considered as an indicator of meritocracy.

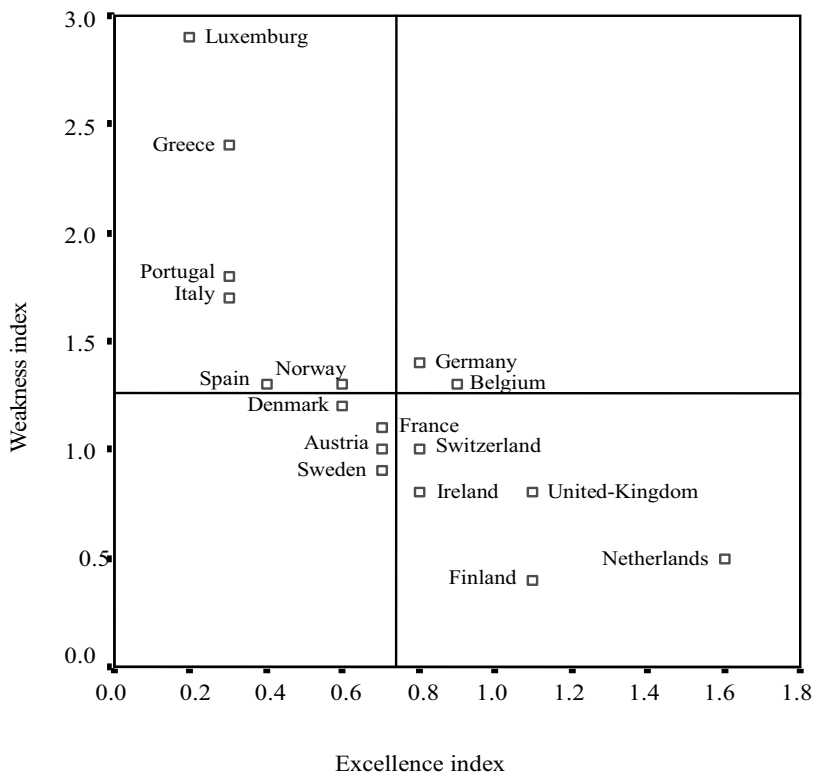


Figure 7.3: Index of Failure by Index of Excellence

Notes: Correlation value:  $-0.80$

Source: our analysis of PISA 2000 data

*Social inequalities of opportunity*

Let us now examine the second dimension of equity between groups, in particular inequality between respondents from different socioeconomic backgrounds. This is an aspect traditionally of interest to sociologists and usually defined as social inequality of opportunity. The extent of this type of inequality (column 3 in Table 7.2) can be seen to be greater compared with those relating to other categories, that is between gender groups and between citizens and foreigners.

To analyse this kind of inequality we utilised a linear regression model of the PISA test scores obtained by students in each country on their social origins, as measured by parental SES (socioeconomic status), the index which OECD employed in its reports)<sup>4</sup>. It is a slightly different indicator compared to that utilised by GERESE<sup>5</sup> and presented here in both Tables 7.2 and 7.3, because it enables us to measure the overall influence of the independent variable on the dependent one and not only to the impact on the two extreme levels of the index.

In general, the variance explained by SES appears to be relevant, but not very strong (the average value is 16.9 per cent). We can suppose that the influence of student's social origin on educational results gets more robust the further they progress in school. It is likely that a stronger influence would be found if academic progression rather than competencies were the criterion.

The pattern which emerges from inspection of the first column of Table 7.4 is one of marked differences between nations and is in some ways surprising, at least when one keeps in mind the results of other studies into the relationship between social origins and success in school careers. In reality, Sweden and the Netherlands — which in Shavit and Blossfeld's (1993) comparative study were the only nations to show a clear tendency towards egalitarian development — appear in third and fourth positions respectively among the 17 nations in the table. Finland is in first position again, followed by Italy, Sweden, the Netherlands; a group composed of Norway, Austria and Ireland is not far behind. Another two southern European nations — Spain and Greece — along with Denmark are in a middle-ranking position, while the most inegalitarian nations are now Luxembourg, France, Germany and Belgium. The UK, Switzerland and Portugal are also above average.

What is particularly surprising in these results is the ranking of Italy which appears side by side with Sweden and the other Scandinavian countries, usually found to be egalitarian. Furthermore, besides Scandinavian countries and Italy, Greece and Spain also show a relatively low level of social inequality in education compared with most of the other European countries, and in particular with the bigger ones: France, Germany and the UK. These are new findings, in apparent

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4 The SES (socioeconomic status) in PISA is an index obtained from the combination of three variables: parents' level of occupation, the extent of their education and cultural goods possessed by the family.

5 It is the standard deviation of the average score of respondents whose parents are located above the 75<sup>th</sup> percentile or below the 25<sup>th</sup> on the SES scale, expressed as a percentage of the average standard deviation in the entire tested population.

conflict with previous research, including in respect of Italy, which is usually located with those nations with the highest proportions of low achievers (see column 7, Table 7.2).

To examine these findings in more detail we have isolated three components of SES: a) parental education; b) parental occupation; c) cultural possessions of the family. Using linear regression models, we have measured the influence of these components on PISA scores, first taking each of them separately and then together (i.e. controlling for each of them in relation to the others through multivariate analysis). The last three columns in Table 7.4 show the results of the simple regression models, while those of the multiple regression model are presented in Table 7.5.

*Table 7.4: Differences in Learning by SES and by Each of its Three Components (Simple Linear Regression Models) \**

	Differences in learning by parents' SES (%)	The three SES components		
		Differences in learning by parents' occupational status**	Differences in learning by parents' educational level***	Cultural possessions of the family****
<i>Austria</i>	13.7	6.0	11.9	6.2
<i>Belgium</i>	21.4	5.7	14.7	9.3
<i>Denmark</i>	16.4	11.3	9.8	7.3
<i>Finland</i>	9.0	4.0	6.0	6.1
<i>France</i>	22.3	5.0	13.5	13.2
<i>Germany</i>	21.8	7.2	16.8	9.6
<i>Greece</i>	15.9	5.5	10.9	9.0
<i>Ireland</i>	13.7	2.5	10.7	6.1
<i>Italy</i>	10.8	6.3	14.2	7.9
<i>Luxemburg</i>	25.6	11.6	17.2	15.3
<i>Netherlands</i>	12.7	6.3	12.0	4.9
<i>Norway</i>	13.6	2.9	8.1	9.2
<i>Portugal</i>	19.5	5.9	16.3	12.6
<i>Spain</i>	16.7	10.7	11.1	9.6
<i>Sweden</i>	11.0	2.0	9.6	8.4
<i>Switzerland</i>	19.5	8.6	16.8	7.0
<i>United Kingdom</i>	20.1	6.8	15.9	10.4
<i>EU</i>	16.9	6.4	12.3	8.8

Notes:

\*  $R^2$  values from all four regression models.

\*\* Using the HISEI index of parents' occupations (OECD 2004).

\*\*\* Based on ISCED index (OECD 2004).

\*\*\*\* OECD (2004) index of cultural possessions.

Source: our analysis of the PISA 2000 database.



As we see, the specific measures presented in columns 2 to 4 give rise to quite different hierarchies. The same evidence results from the multivariate model whose coefficients are presented in Table 7.5.

Table 7.5: Differences in Learning by Each of the Three SES Components  
(Multiple Linear Regression Model)

	Variance explained by the model ( $R^2$ )	Standardised <i>beta</i> coefficients		
		Differences in learning by parents' occupational status *	Differences in learning by parents' educational level **	Cultural possessions of the family ***
<i>Austria</i>	14.2	0.13	0.24	0.13
<i>Belgium</i>	21.0	0.25	0.13	0.18
<i>Denmark</i>	17.7	0.12	0.28	0.12
<i>Finland</i>	9.3	0.09	0.14	0.17
<i>France</i>	22.4	0.17	0.25	0.26
<i>Germany</i>	21.2	0.23	0.18	0.17
<i>Greece</i>	15.9	0.10	0.21	0.21
<i>Ireland</i>	14.2	0.08	0.28	0.18
<i>Italy</i>	11.2	0.11	0.23	0.17
<i>Luxemburg</i>	26.2	0.23	0.17	0.26
<i>Netherlands</i>	13.7	0.14	0.26	0.11
<i>Norway</i>	13.81	0.02	0.20	0.22
<i>Portugal</i>	19.6	0.32	-0.01	0.23
<i>Spain</i>	17.2	0.14	0.22	0.18
<i>Sweden</i>	11.3	0.06	0.23	0.20
<i>Switzerland</i>	20.3	0.29	0.17	0.12
<i>United Kingdom</i>	20.2	0.27	0.11	0.20
<i>UE</i>	17.41	0.16	0.21	0.18

Notes: the components of SES included here in the last three columns are the same as those included in the last three columns of Table 7.4 (see the relevant notes).

Source: our analysis of the PISA 2000 database .

In general, the weight of the two components which in Bourdieu's terms may be seen as forms of cultural capital — parents' educational level and cultural possessions of the family — is greater than that of parents' occupational status, which may be seen as closer to economic capital. But, in all the Scandinavian countries, Ireland, Italy, Greece, Spain and the Netherlands, parents' occupational

status contributes to the explanatory power of the models less than in the other countries. All in all, it would seem that the shared low influence of family economic capital is the factor which levels out social inequality of opportunity both in the Scandinavian countries and in Italy.

The following graph shows the relationship between SES and mean scores.

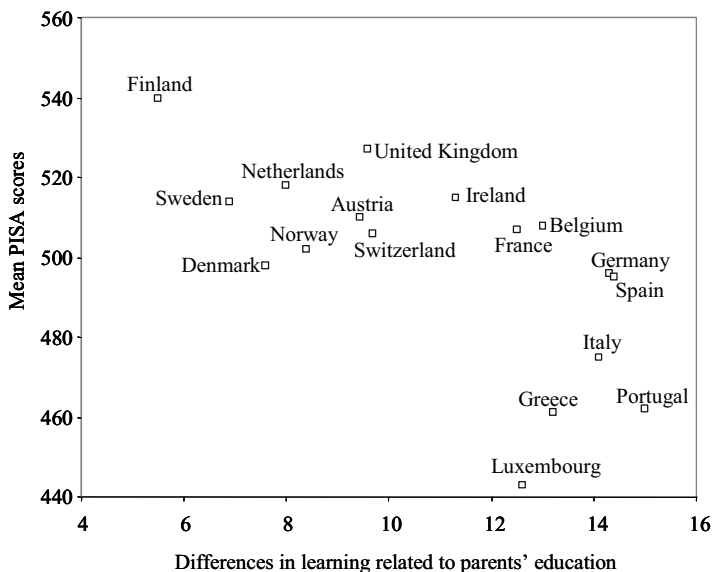


Figure 7.4: Correlation between mean PISA scores and differences in learning related to parents' education

Notes: Value of the correlation: -0.48

Source: our analysis of PISA 2000 database

Once more, the two variables appear to be inversely correlated in a statistically significant way. However, there are some exceptions, among which the more relevant are those of Italy (low inequality, low performance) and the United Kingdom (quite high inequality, high performance).

*The factors influencing differences between nations in social inequality of opportunity with regard to the acquisition of competencies*

The final report of the GERESE project does not attempt to explain or interpret findings, as this is beyond its brief. But it is worth alluding here to some plausible *prima facie* hypotheses and testing them empirically. This will also be attempted with respect to inequalities relating to academic progression. In both cases, we will use quantitative methods, with the unit of analysis being the European nations to which the GERESE indicators have been applied. It is possible that a

methodological approach such as this, which employs a necessarily limited number of variables, may be omitting other important ones, even for one nation only, or may be failing to recognise spurious relationships between variables. Ideally one would combine this quantitative analysis with comparisons of a deeper and more qualitative nature based on a limited number of national case studies, thus combining the advantages of a comprehensive overview with an approach more sensitive to national specificities.

A first hypothesis is suggested by the relatively high correlation (0.60) between the measures of distribution (column 1 of Table 7.2) and those of the influence of social origins (column 3) on the acquisition of the three competencies, a relationship shown in Table 7.3. It can be added that this relationship persists when we examine non-European nations participating in PISA, as shown in work by Duru-Bellat, Mons and Suchaud (2003)<sup>6</sup>. We can therefore infer that:

- With the exception of a few specific cases, nations with lower levels of disparity between individuals are also those with lower levels of social inequality (we can observe that the national education systems which produce the most homogeneous results, for example Finland and Sweden, seem to allow less room for social influences to affect success);
- Again with the exception of a few specific cases, differences in outcomes are increased in those nations where more powerful mechanisms of scholastic selection sift students on the basis of very heterogeneous levels of performance;
- However, the causal direction of this correlation is not clear. It is also possible that quite the opposite case may be true, i.e., that a weaker influence of social origin on scores brings about smaller between-individual variance.

The thesis which links social inequality in education to the severity of academic selection contrasts, moreover, with the theory put forward by one school of contemporary English thought represented by Halsey, Heath and Ridge (1980) according to which increased school selectivity increases equality of opportunity, presumably because on the one hand it acts as a spur for children from the poorest backgrounds to greater efforts in their study and on the other hand has the effect of skimming off the less gifted offspring of the middle and higher classes. We can immediately question this argument by hypothesising that the more a nation produces performances characterised by high levels of very weak and very strong results, the more these results seem to be conditioned by social origins. Our descriptive statistics have shown that this seems to be true regarding the low attainment index (“reaching a minimum threshold”), whilst it is not so for the “excellence” index.

Our argument that social inequality is linked to relative severity of selection is similar, and in some ways complementary, to that advanced by Duru-Bellat, Mons and Suchaud (2003) in relation to a wider number of nations, both European and

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6 We must emphasise here the fact that two non-European countries (Japan and Korea) are shown to be more egalitarian than Finland, while the USA occupies a median position.

non-European (including the United States, Japan, Korea and Russia). These researchers have found statistically significant relationships between social inequalities in the reading competencies measured by PISA and structural factors of differentiation in the national systems of education, such as the length of a common, undifferentiated phase of secondary schooling, early streaming, high levels of grade repetition, and high levels of social and academic segregation within the secondary system. The underlying hypothesis is that the earlier and the more accentuated the mechanisms of streaming, the stronger is the influence of social origins on results, because socially disadvantaged students are more often relegated to those streams and institutions where lower quality education is offered.

Another plausible explanation might be found in the lower rate of school enrolment at age 15 (see Table 7.6). We know, in fact, from studies of completion and progression that the influence of social origins on early leaving is very strong and we can therefore argue that a significant part of the influence of social origins in the PISA nations has remained hidden. As we see in Table 7.6, however, the differences between European nations with regard to school attendance at age 15 are now quite modest, too modest to affect the measure of the influence of social origins significantly.

*Table 7.6: Rates of Enrolment in School at Age 15*

	Rate of participation at age 15
<i>Belgium</i>	98.25
<i>Denmark</i>	97.15
<i>Germany</i>	99.68
<i>Greece</i>	97.25
<i>Spain</i>	97.75
<i>France</i>	99.94
<i>Ireland</i>	98.52
<i>Italy</i>	98.37
<i>Luxemburg</i>	99.34
<i>Austria</i>	95.20
<i>Portugal</i>	96.10
<i>Finland</i>	99.98
<i>Sweden</i>	99.90
<i>United Kingdom</i>	96.46
<i>Norway</i>	98.89
<i>Switzerland</i>	97.40
Mean	98.14
Deviation	1.5

Note: Source: PISA 2000

A third explanation may arise from the possibility that the reproductive tendencies of a system of inequality may vary in relation to the size of those

inequalities. For example, a country where the educational levels of the parents do not vary greatly would be less likely to reproduce inequality in subsequent generations than countries with more dispersed patterns of schooling and with greater proportions at the extremes. A fourth argument concerns inputs and has been summed up by authors such as Coleman (1990), that only a strong and well-resourced school can successfully fight against social inequality of opportunity.

The explanations postulated thus far may be termed “school-centric”, in that they are focussed on the schooling system, on its structures and on its operation, or on contextual aspects relating to the distribution of educational goods in the adult population. We might ask, however, whether variations in the impact of social origin on the learning of competencies might not depend rather on non-school factors such as national income, the extent of socioeconomic inequality, unemployment rates, and the percentage of families with children under the poverty threshold. It is worth remembering that studies of social inequality of opportunity in progression have strongly emphasised the importance of variables of this type, sometimes assigning them a greater importance than that given to school systems themselves. National income, its pattern of distribution, unemployment rates and poverty could affect social inequalities in terms of learning competencies through changes in the cost-benefits associated with investment in education (in terms of money, time and effort) for students from different social backgrounds. Income, moreover, is strongly correlated with public spending on education and with the educational and occupational profiles of the labour force and thus with the demand for work, variables which in turn could have an impact on the reproduction of inequalities.

We sought to test these various interpretations empirically using regression analysis. We came to the conclusion that the model which best fits the data takes the influence of parents’ education on PISA scores as the dependent variable and includes six independent variables. Among these, the three most important are: an index of differentiation amongst education systems (Duru-Bellat, Mons and Suchaud 2003); the Sen index of equity as measured by threshold achievement; and a wealth index, used in PISA 2000, to measure inequality in family income. As is shown in the following table, the model is highly effective ( $R^2=0.66$ ) and all three variables have a strong explanatory effect. Two further variables add significantly to the model’s effectiveness: the standard deviation of years of schooling (a measure of educational inequality in the population); and per capita spending on education. In conclusion, we would argue that this model favours a mixed view of the origin of differences in equity performance between European nations, reflecting both internal and external factors.

Table 7.7: Factors Explaining International Differences in the Level of Influence of Parents' SES on the Acquisition of the PISA 2000 Competencies

Model Summary

R = 0.813

R<sup>2</sup> = 0.661

	Standardised Coefficients Beta
(Constant)	
P.C Income	-0.069
P.C. Spending	-0.280
Differentiation Index	0.516
Sen Index	0.468
S.D. Years of Parental Education	0.226
S.D. of Parental Wealth index	0.657

Notes:

Linear regression model

Independent variables:

- Per capita national income. Source: World Bank 2001 dataset (<http://www.worldbank.org/data&research>).
- Per capita spending in education. Source: *Education at a Glance*, 2002, OECD-CERI, Paris.
- Sen Index (see column 7, Table 7.2).
- Differentiation index. Source: Duru-Bellat and Mons, Suchaut (2003).
- Wealth index (inequalities of income between parents of PISA 2000 respondents)
- Standard deviation of years of education in the whole population. Source: *Education at a Glance*, 2000, 2001, 2002, OECD, Paris.

Dependent variable:

- Influence of parent's socioeconomic status (SES Index) on variation in PISA 2000 scores (regression coefficients in column 1, Table 7.4)

*Inequity relating to progression in the education system: 1. Not reaching a minimum threshold*

We now turn to the indicators of equality of outcomes relating to the second profile under consideration. This concerns academic progression in education systems rather than student learning as such (competencies). Of the two sole relevant indicators in Table 7.2 of between-student differences and the population below the threshold, the more interesting one reports the percentage of 25-34 year-olds without an upper secondary school certificate, a level of schooling which may be regarded as a threshold requirement in culturally evolved societies such as those of Europe. Here the most equitable nations are Norway, Switzerland, Denmark, Sweden, Finland, Germany and Austria, and the least equitable are Portugal, Spain, Italy and Luxembourg. The differences are large, as can be seen in the gap between Norway

(6.08 per cent) and Portugal (69.52 per cent). There is also a certain homogeneity evident for large geographical areas: the Scandinavian (and to an extent the Germanic) nations are more equitable, while those of southern Europe are less so, with the remainder occupying a middle position. Influencing these rankings are contextual factors, for example relating to income and labour markets, and other factors relating to education systems themselves.

Table 8 presents a model which is quite effective in explaining differences between nations in the proportion of adults aged 25-34 years without a senior secondary certificate ( $R^2=0.542$ ). This model has two internal variables — an index of differentiation within education systems and per capita spending on education — and two contextual variables, namely per capita income and percentage of families with children living below the poverty. Compared with the model employed to explain international differences in social inequalities of opportunity relating to the acquisition of basic competencies, this model assigns a high level of importance to contextual factors.

*Table 7.8: Factors Explaining International Differences in the Proportion of the 25-34 Year-Old Population without a Senior Secondary Certificate*

*Model Summary*

R = 0.736

$R^2 = 0.542$

	Standardised Coefficients Beta
<i>(Constant)</i>	
<i>P.C Income</i>	-0.081
<i>P.C. Spending</i>	-0.130
<i>Differentiation Index</i>	0.445
<i>% of Families with Children in Poverty</i>	0.585

Notes:

Linear regression model

Independent variables:

- Per capita national income (see notes in Table 7.7)
- Per capita spending on education (see notes in Table 7.7)
- Differentiation index (see notes in Table 7.7)
- Percentage of families with children in poverty. Source: Luxembourg Income Study (<http://www.lisproject.org/>).

Dependent variable:

- Proportion of the 25-34 year-old population without a senior secondary certificate (see column 8 in Table 7.2).

*Inequity relating to progression in the education system: 2. Social inequality of opportunity*

However, the most interesting dimension relating to progression is social inequalities of opportunity. In Table 7.2, there was no column for progression, as sufficiently up-to-date data for all European nations were not available. Nevertheless, one of the GERESE indicators (C.3.1) relates specifically to progression through school and combines old and new data. The more recent data are derived from the analysis conducted by Jannelli (2002) on the results of the *ad hoc* survey of transition from school to work as part of the European Labour Force Survey (Eurostat, 2000), while the older data are derived from the work of two French researchers (Duru-Bellat and Kieffer, 1999), who combined data from various sources.

Table 9 reports the impact of social origin on progression, using three GERESE measures of socioeconomic status, to which we have added a fourth. Column 1 reports the odds ratios of acquiring or not acquiring the upper secondary certificate on the part of 25-35 year olds (having left school 5 or 10 years before) whose parents have low levels of educational qualifications (left school before secondary school) and those whose parents have high levels of educational qualifications (holding tertiary qualifications). Column 2 reports the same indicators of probability, but this time in relation to completion and non-completion of a tertiary qualification. Column 3 reports the level of influence of social origins on highest level of education achieved. Column 4 reports the regression coefficients for the relationship between years of schooling attained by respondents and the level of education of their fathers. The first two indicators are derived from the study by Jannelli and conform substantially to the results of the logistic regression used in that study. They refer, however, to only 8 of the 17 countries included in our own study<sup>7</sup>. The third indicator, which allows the inclusion of another three important European nations — Germany, Netherlands and the UK — consists of the regression coefficients for highest level of education achieved by respondents by father's occupation and level of schooling. This was derived from the study by the two French researchers cited above. On a cautionary note, it should be noted that the categories used, the methods of analysis and the reference years for this indicator are neither internally consistent nor consistent with the indicators used in the first two columns. The last column reports the coefficients of the linear regression of years of education completed on parents' educational level, as derived from Esping-Andersen and Mestres, who have reported on the findings of the OECD-IALS study<sup>8</sup>. These are internally consistent and recent data, though not consistent with the methodologies used to construct the indicators in the first two columns of the table, in part because they relate to the

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7 The *ad hoc* module, created in 2000, related to representative national samples of young people aged 15 to 35 who had left school in the previous 10 years (5 in Sweden and Finland). It embraced a certain number of Eastern European countries as well as 8 of the then 15 EU member states.

8 Esping-Andersen and Mestres analysis also includes two non-European nations, Canada and the United States.



entire adult population (16-65) and not just young people. The fourth column allowed the inclusion in our Table 7.9 of two other nations — Denmark and Norway — and provided an external verification of the position of Sweden, Germany, the UK and the Netherlands.

Table 7.9: Social Inequalities of Opportunity in Educational Progression

	*	*	**	***
	Odds ratios of obtaining an upper secondary qualification related to parents' education level	Odds ratios of obtaining a tertiary degree related to parents' education level	Influence of social origin on the highest education level attained	Coefficients of association between father's education level and respondent's education level
<i>Belgium</i>	8.7	3	-	
<i>Denmark</i>	-	-	-	0.277
<i>Germany</i>	-	-	26-28 %	0.803
<i>Greece</i>	3.3	2.3	-	
<i>Spain</i>	3.6	2	-	
<i>France</i>	4.3	2.3	20%	
<i>Ireland</i>	-	-	-	
<i>Italy</i>	3.5	6.8	26-28 %	
<i>Luxemburg</i>	-	-	-	
<i>Netherlands</i>	-	-	11%	0.319
<i>Austria</i>	2.4	2.9	-	
<i>Portugal</i>	-	-	-	
<i>Finland</i>	1.6	1.1	-	
<i>Sweden</i>	1.8	1.8	-	0.085
<i>United Kingdom</i>	-	-	17%	0.489
<i>Switzerland</i>	-	-	-	
<i>Norway</i>	-	-	-	0.105

Note: \* Jannelli (2002)

\*\* Shavit and Blossfeld (1993)

\*\*\* Esping-Andersen and Mestres (2003)

The first column shows a strong polarisation between the most inegalitarian nation — Belgium — and the most egalitarian ones — Finland, Sweden, and to a lesser extent Austria — with a middle group with similar values, made up of France, Spain, Italy and Greece. The second column presents an almost identical ordering of nations with Finland, Sweden and to a lesser extent Spain showing the least impact of social origins, while Italy now has the greatest impact, with a middle group consisting of France, Greece, Austria and Belgium. If instead of the odds ratios

based on extreme values (parents with respectively the highest and the lowest levels of education) we were to use the logistic regression coefficients calculated by Janelli, which take into account all the variability observed in the sample, the rankings would only be marginally different. With regard to the upper secondary certificate, Austria would be closer to Belgium, with social origin showing stronger effects, while in the area of tertiary education, Belgium would be closer to Italy<sup>9</sup>.

The third column ranks the Netherlands as the most egalitarian nation, followed by the UK and France, with Italy and Germany having the least equality of opportunity. The fourth column identifies Sweden and Norway as showing the weakest association between social origins and level of education, Denmark and Netherlands in the middle, while the UK and Germany, have the highest levels of association between these variables<sup>10</sup>.

Even though the indicators used are different and constructed in a variety of ways, we can see that the results are largely consistent. Sweden is always amongst the most egalitarian nations, while Germany and usually Italy are among the least egalitarian, with the UK and France in the middle. The Netherlands is placed as the most egalitarian on one occasion and in the middle on another.

Another factor to note is that these findings, overall, show similarities to those reported earlier for minimum thresholds. On both types of indicators, Norway, Finland and Sweden seem to be among the most equitable nations, Italy the least equitable, and France, the Netherlands and Greece in the middle. For the other nations, the findings differ to a greater or lesser extent between the two approaches. The greatest difference is for Germany which in the measures of social equality of opportunity tends towards the least equitable, with Belgium, the UK and Denmark also lower in the rankings, while Spain obtains a better result here than that relating to the minimum threshold.

*The factors that influence differences between nations in social inequality of opportunity with regard to academic progression*

The first comment to be made on the data presented is that there are large differences between nations in the impact of social origins on academic progression and that it is not easy to identify the causes of these differences. At first glance, we can guess that, taken alone, a contextual economic explanation does not seem to hold. In some nations, which have roughly similar levels of economic development and similar occupational structures, for example, Germany, France, Sweden and the UK, there are marked differences in terms of social inequality of opportunity. The

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9 Some Eastern European countries, which were not included in the GERESE project ratings but were in the ad hoc module "European Labour Force Survey" (2000) register, show coefficients of the influence of social origin on scholastic career at secondary and tertiary level that are higher than those relative to the European nations we examined, including Belgium and Italy.

10 As far as non-European nations are concerned, Canada ranks among the more egalitarian countries, while the USA is in a median position.

idea of the “Swedish exception”<sup>11</sup> is often the subject of sociological research into inequality (e.g. Erikson and Jonnson, 1996). This could be extended to include Finland and Norway and suggests the idea of a “Scandinavian exception”. As in the case of Sweden, the main causes of inequality differences appear to be related to social rather than economic aspects of the context: in particular, job security, poverty in childhood and the limiting of inequalities in income and quality of life. These are factors with which a number of the GERESE indicators are concerned.

Again it is possible that social contextual factors rather than economic ones lie at the root of the considerable international differences reported in Table 7.9. However, *prima facie*, it would seem that these are not the only determining causes either. Let us look at some examples. Norway, Finland and Sweden share in common low levels of child poverty and moderate levels of income inequality (e.g., as measured by the GINI Index). However, levels of unemployment in Finland (both youth and adult), unlike other Scandinavian countries, are high, more so than in Germany or the UK, which are nevertheless decidedly more egalitarian. Income inequality is relatively low in Belgium and Italy, lower than in Austria, France, Spain and Greece, countries that are nevertheless either more or equally egalitarian in terms of academic progression. It therefore seems sensible to investigate the causes of these between-nation differences, not only from the point of view of context, but also in terms of internal factors, that is, factors relating to the operation of national education systems and of their evolution (for a similar view, arguing even more strongly for the need to examine the specificities of national systems and the impossibility of forming overarching universal conclusions, see Muller and Karle, 1990).

Such an idea is confirmed by the regression analysis (see Table 7.10) we have made, taking as the dependent variable the measures of the influence of parental educational level on the probability of obtaining an upper secondary school certificate. This has been chosen as the indicator closest to the others used here to measure social equality of opportunity in educational progression.

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11 The “Swedish exception” was cited mainly due to changes which occurred over a period of time and were monitored through the years, but there may well be a relation between these and current differences at international level.

Table 7.10: Factors Explaining International Differences in Social Inequality of Opportunity in Academic Progression

*Model Summary*

R = 0.798

R<sup>2</sup> = 0.638

	Standardised Coefficients Beta
<i>(Constant)</i>	
<i>P.C Income</i>	-0.092
<i>P.C. Spending in Education</i>	-0.112
<i>Differentiation Index</i>	0.628
<i>% of Families with Children in Poverty</i>	0.402

Notes: Linear regression model

Independent variables:

- Index of differentiation. Source: Duru-Bellat, Mons and Suchaut (2003).
- Per capita spending in education. Source: *Education at a Glance* OECD 2000, 2001, 2002.
- Percentage of families with children below the poverty line. Source: Luxembourg Income Study (<http://www.lisproject.org/>).
- Per capita national income. Source: World Bank 2001 dataset.

Dependent variable:

- Influence of parents' level of education on the probability of obtaining an upper secondary school certificate (beta coefficients from Jannelli's logistic regression model).

A model that fits quite well (R<sup>2</sup>=0.638, a high value) is one that, like the previous model, includes two independent variables internal to educational systems — the differentiation index and national expenditure on education — and two contextual variables, per capita income and percentage of children living in poverty. Among these variables, the most important appears to be the differentiation index, but percentage of children in poverty also has a considerable impact. As expected, both the other two factors — income and expenditure — have a negative influence on the dependent variable, but this is rather limited.

What are the arguments which might support the multi-causal model proposed here? The fact that the index of differentiation might be one of the most influential factors was already evidenced by the regression models involving both the international differences in social equality of opportunity (acquisition of basic competencies at age 15) (Table 7.7) and in the proportion of the 25-34 age group without a senior secondary certificate (Table 7.8). We can well imagine that the level of differentiation becomes even more influential in the final phases of schooling. Moreover, in these phases, differences between nations with respect to the level of differentiation also become stronger. It is worth recalling that many variables which weigh highly on the differentiation index have already been shown

to be very clearly associated with social inequality of opportunity in education by previous research in this field.

Previous research has shown that poverty in childhood is a major determining influence over achievement during the earliest years of cognitive growth, but with indirect and increasing effects on subsequent educational career (see, for example, Esping-Andersen, 2002).

Lastly, results obtained from this analysis demonstrate once more that a mixed (internal and contextual) causal model is the most plausible in explaining differences on equity indicators among European countries.

## CONCLUSIONS

The empirical analysis which is presented in this chapter (based on the theoretical framework and in part on our further elaboration of the findings of the GERSE project) leads us to a number of conclusions. Let us summarise the main ones.

The first relates to the three dimensions of equity reflected in the theoretical framework of the GERSE project: inequalities between individuals, inequalities between groups and proportions of the population below a minimum threshold. These were the dimensions deemed capable of representing phenomena that were at least partially independent and therefore able to justify the pluralistic approach adopted. Though this assumption was confirmed by data, significant correlations also emerged among the most important competency indicators from the PISA study. In particular, the impact of social origins on students' results in reading, mathematics and science was found to be strongly correlated with the distribution of those results. In other words, the nations with the greatest inequalities between individuals (with some significant exceptions) were the nations with the greatest social inequalities of opportunity. We might argue therefore that the extent of the distribution of students' results marks the limits of the space in which the impact of social origins can be manifested. The more limited the space, the more limited is the impact of social origins (and vice versa).

The interdependence of indicators relating to competencies and those relating to progression was, however, weaker and nearly always not significant statistically. This is not surprising given the different ages and levels of education at which the PISA competencies are tested and given the fact that they are different phenomena, with the latter probably manifesting greater levels of inequality and influenced by a more complex range of factors.

A second issue relates to the magnitude of inequality phenomena on the three GERSE dimensions: differences between individuals, failure to reach a minimum threshold and inequality of opportunity between classes or social strata. The first is definitely the most important statistically, but it is also the most difficult to evaluate from an equity point of view. The second, too, is of great importance both in terms of competencies and progression. The third, if analysed in relation to the attainment of PISA 2000 competencies, appears somewhat less pronounced; furthermore, it seems to be more strongly related to cultural capital (parental level of schooling and

possession of cultural goods in a family) than to economic capital (parental occupational status).

A third interesting conclusion that may be drawn from this study relates to the links between equity, effectiveness and excellence. Compared with the common view that policies aiming for equity and therefore a just equality will necessarily diminish effectiveness and excellence, our analysis of the PISA data shows that there are positive correlations between these variables, ranging from weak to very strong. It is more often the case that the most equitable nations are also the most effective (i.e. possessing the highest average scores) than the reverse. It is also the case that those nations with the lowest proportions of respondents below the minimum threshold in competencies are also those with the highest proportions of high-achieving students. We might say, therefore, that equity in this sense conforms with the principles of meritocracy in that it deepens the pool from which meritocratic selection occurs.

It should be noted, however, that two diverging paths towards equity could be seen here, if we understand equity as a limiting of gaps between both individuals and social classes or strata in the attainment of competencies. The first path — displayed in various southern European nations, particularly in Italy — balances a large amount of low achievement by a limited amount of high achievement, that is, it occurs through a flattening and lowering of results. The second, seen mainly in Scandinavian nations, attempts to limit the proportion of low achievers, increase the proportion of high achievers, and in so doing to raise average scores. We can argue, therefore, that the coincidence of equity and effectiveness is not always to be assumed, but is certainly not impossible, as in fact it occurs more often than not in European nations.

Furthermore — and this is the fourth conclusion — we ought to stress that a large amount of inequity or inequality does not in itself imply uniformity. We have established that there are significant differences between nations and we have attempted to explain these differences. This was done using regression analysis to disaggregate the effects of various potentially critical factors, both internal and external to national education systems. This analysis was conducted three times: with regard to a) the influence of the socio-economic index (SES) on PISA competencies; b) the proportion of young people failing to reach the minimum threshold in terms of schooling; c) the impact of parental education level on children's progression in school (defined as completion of the upper secondary school certificate). The results of our regression analyses show that the most effective causal model has a mixed nature, as it combines factors external to educational systems with internal factors.

Keeping in mind the need to approach the results of this study with some caution and the need to confirm them with more qualitative studies of individual countries, it must be noted that the level of structural and operational differentiation within national education systems was found to be the key internal factor, while inequalities in family income and the proportion of families with children living below the poverty line were found to be the key external factors.

Finally, it is important to note the usefulness of the comparative approach both in the description of phenomena and in their explanation and interpretation — a necessary initial step in any effective attempt at intervention. The comparative approach used by GERESE in this international study could be adapted for use at the national level to examine various sub-systems — geographical areas, types of schools, etc. — and even differences between educational institutions. Equity policies, like all policies relating to education, are multi-level and require the use of multi-level methods of research and measures.

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## Social Class and English Higher Education

*Diane Reay*

## INTRODUCTION

When degrees were held by less than two per cent of the labour force, they may have been extremely important for the careers of the qualified men and women but they were too rare to have a major impact on the labour market as a whole. As the number of graduates has grown the degree has become an increasingly common entry qualification for a growing number of high-level occupations. Thus, higher education has played a progressively greater part in the reproduction of the occupationally-based class structure. So it is not surprising that class inequalities have persisted. Nor is it surprising that class differentials among women are just as marked as they are among men (Blackburn and Jarman, 1993, p205).

However, what Blackburn and Jarman were describing in 1993 still holds 15 years later. In England there is an enormous amount of rhetoric around widening access and participation but little realisation. There are a plethora of widening access courses but still fewer working-class students going to university in 2006 than fifteen years ago.

In 1991-2, 13 per cent of children from the lowest social class went to university. By the end of the decade, after the introduction of tuition fees and the abolition of student grants, the figure was 7 per cent despite efforts by universities to broaden their intake (Patton, 2003).

In some ways widening access to universities in England is a tale of the failure rather than success of policy. Despite rhetoric to the contrary, opportunities for social mobility for young people from working-class backgrounds are fewer at the beginning of the twenty-first century than they were twenty years ago, and the expansion of further and higher education that has taken place over the last twenty years has benefited the 'not-so-bright' middle-class rather than the academically able working class (Schoon et al., 2001).

In this paper I want to juxtapose some of the rhetoric with the realities but also to describe how widening access is lived by the non-traditional students it is supposedly aimed at. The English case offers some cautionary lessons in relation to widening access. In England we have drawn a growing number of working-class students into higher education over the past decade but they face a very different higher education experience to their middle-class counterparts, and for the most part go to very different universities. Furthermore, while the recent emphasis on

widening participation and access to higher education assumes a uniformly positive process, the reality, particularly for working-class students, is often confusing, fraught with difficulties and social exclusions.

In Ireland Kathleen Lynch and Claire O'Riordan (1996) found that financial barriers were the overriding obstacle to equality of opportunity for third level education. Similarly, in England financial barriers have been a major problem and have been exacerbated by the abolition of maintenance grants and the introduction of tuition fees. The financial and personal costs are high, too high for many working-class groups in English society. The consequences of these high costs and the still powerful barriers to working-class participation, particularly in the old university sector, are all too evident in the demographic data on participation. Recent research has revealed that students entering old universities are twice as likely to come from middle- or upper- class families as those starting at the former polytechnics which form our new universities (Sutton Trust, 2005). And while new universities such as London Metropolitan and South Bank have a critical mass of working-class students, three out of five still come from higher socio-economic groups. As Helena Kennedy (1997) concludes, "even with the exciting expansion of further and higher education, the working-classes have not been the real beneficiaries". In 2001 only 27 per cent of those in higher education came from social class groups 4 to 7 (Ashley and Wintour, 2002), and most of those 27 per cent are in the new university sector. The expansion of higher education from the 1970s to the 1990s was associated with a widening of the socio-economic gap in higher education participation (Blanden and Machin, 2004). Since then the situation has slightly worsened. The gap in participation rates by the highest (1-3) and the lowest (4-7) social groups was 30 percentage points in 1996 and 31 percentage points in 2001 (Galindo-Rueda, Marcenaro-Gutierrez and Vignoles 2004). And between 2004 and 2005 university entrants from unskilled working-class backgrounds fell from 4.68 to 4.59 per cent of total entrants (Tysome, 2006).

In contemporary England, with the transition from an elite to a majority system, higher education is going through the process of increased stratification that Bourdieu (1988) described in relation to France. Instead of a system characterised by relatively straightforward class-based inclusion and exclusion, we now have a far more differentiated field of higher education but one still underpinned by exclusivity and exclusions. There is a political rhetoric of widening access, achievement-for-all and meritocratic equalisation within mass higher education. Yet changes in the scale and scope of higher education, however significant these may be, should not distract attention from the continuing and developing forms of social stratification within higher education. While more working-class and minority students are entering university, for the most part they are entering different universities to their middle-class counterparts. The ending of the binary divide in UK higher education, whilst negating traditional distinctions between institutions, has fostered the emergence of a new hierarchy of institutions in which prestigious research universities have emerged as a top layer of elite institutions. And it is these universities which remain overwhelmingly white and middle class in composition (Tables 8.1 and 8.2).

Table 8.1: Top 5 Universities Access Statistics

	No. of young	%
<i>From private schools (7% of families)</i>	4,580	48
<i>Working class families (50% of families)</i>	980	10
<i>From low participation areas (33% of families)</i>	450	5

Table 8.2: Top 13 Universities Access Statistics

	No. of young	%
<i>From private schools (7% of families)</i>	10,690	39
<i>Working class families (50% of families)</i>	3,470	13
<i>From low participation areas (33% of families)</i>	1,740	6

Note: Source: (Sutton Trust 2005 Entry to Leading Universities based on the top 5 (Cambridge, Oxford, Imperial, LSE and UCL) and the top 13 universities (Cambridge, Oxford, Imperial, LSE and UCL, St Andrews, Edinburgh, York, Warwick, Bristol, Birmingham, Durham and Nottingham)

As the Sutton Trust (2005, p3) concludes, “The probability of getting into a top university is approximately 25 times greater if you come from a private school than from a lower social class or live in a poor area and is approximately double what it should be based on entry qualifications”. These inequities are further compounded by the per-student spending in different British universities<sup>1</sup>. In relation to education courses Manchester has the highest spend score per student at 10, Cambridge is second with a rating of 9. Two new universities, Luton and Oxford Brookes, have the lowest spending rate at 2. Similarly in relation to sociology courses, Cambridge is the top spender at 10, followed by Birmingham at 9, while at the bottom of the spending table are two new universities, Wolverhampton with 3 and Teeside with 2. We see clearly in these statistics one of the ironies in higher education policy. The pattern is for newer universities (where resources are most needed) to have the lowest per student spending while the elite institutions are all clustered at the top of the spending league tables (Guardian, 2006).

In England we now have a plethora of access schemes. Our continuing problem is that despite these schemes the old universities still take very few working-class students. This peculiarly English problem is the result of a still-powerful sense of class in English society which is manifested in a sense of ‘knowing your place and the place of others’. As I will show later for those working-class students who do move into elite universities there remain difficult and sometimes painful social and cultural consequences. The sham of England’s widening access and participation

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<sup>1</sup> Spend per student included in this indicator is expenditure per cost centre on operating costs such as central libraries, information services and central computers. All costs are calculated per student and used by all courses in the broad categories.

policy is that it does not even attempt to deal with the intractability of social class inequalities. Rather, the emphasis is on encouraging state school students in urban areas to apply for elite universities, schemes that my own middle-class children qualify for, as well as those of many other professionals. So the binary of state and private schooling has become a totally inadequate proxy for working and middle class in many of the elite universities' widening participation schemes.

So this is the challenge for those of us committed to greater equality of access to higher education in England: trying to persuade Government that this is not a simple issue of getting more state school pupils into elite institutions but a far more complex one of material and cultural constraints and class dispositions that the policy makers do not even appear to understand, let alone be prepared to legislate for. I now want to draw on an Economic and Social Research Council (ESRC) research project on higher education choice to unpick why this might be.

### *The Research Study*

In order to capture some of complexities surrounding issues of widening access I am going to be drawing on evidence from a large funded study of higher education choice and access which included both qualitative and quantitative data. The research team of myself, Stephen Ball and Miriam David administered a questionnaire to 502 students across 6 institutions, using tutors to select representative tutor groups for us. The 6 educational institutions comprised mixed comprehensive schools for 11-18 year olds with a large minority working-class intake and a comprehensive sixth form consortium which serves a socially diverse community, a tertiary college with a very large A-level population, an FE College which runs higher education Access courses, and two prestigious private schools, one single-sex boys and a single-sex girls. All of the institutions are in or close to London.

Individual interviews were then conducted with 120 students across the six institutions. At first we interviewed those who had volunteered through the questionnaire but then we attempted to broaden the sample to both address imbalances (notably in relation to gender), and to include a range of interesting cases, for example, first generation students and Oxbridge entrants in state schools. We also interviewed 15 sixth form tutors and other key personnel in these institutions, and a sample of 40 parents. Supplementing these three data sets were field notes from participant observation. I attended a range of events, parents' evenings, higher education careers lessons, Oxbridge practice interviews and tutor group sessions on the university application process.

The extremely diverse nature of the institutions also allowed us to examine the access and choice-making processes for very different groups of students in terms of class background and ethnicity. However, this paper focuses particularly on non-traditional entrants to university and their perspectives on the higher education process.

## “NOT MUCH OF A CHOICE”

*Class differentiated processes within higher education decision-making*

As Giddens (1995) points out, choice is a medium of both power and stratification. Individuals applying to do higher education courses are making very different kinds of choices within very different circumstances and constraints. Degrees of choice were most evident in the extent to which students talked about geographical constraints. Here we can see the continuing influence of structural factors on higher education choice. The transcripts of the working-class students were saturated with a localism that was absent from the narratives of more economically privileged students. The powerful material constraints of travel and finance often mean students are operating within very limited spaces of choice in which, for example, an extra few stops on the tube can place an institution beyond the boundaries of conceivable choice.

Khalid is an extreme example of working class localism, but most of the working class students felt geographically constrained:

“You see City University is a walking distance from my home, Westminster is also walking distance, but it’s not that short as it is to City University. So I’m sort of still thinking” (Khalid, working class, Bengali student, CCS).

A number of the further education students spoke about working out the relative costs of travelling to different London higher education institutions and, while travel costs were not their sole criterion of choice, they clearly played a major role in delineating the possible from the impossible.

As the example of Khalid demonstrates, localism is a ‘race’ as well as a class issue. Forty per cent of minority ethnic students are located in the London universities and primarily in the ‘new’ and less established university sector (Preece, 1999). However, for both black and white working class students there are further issues around fitting in that reinforce and compound working-class students’ inclination to think local. As Irish research studies have found, working-class students lack an ownership of higher education, especially university education, and there are concerns about not being able to fit in with more privileged students.

However, choice of higher education is also, of course, constrained by the predicted and actual examination grades achieved by the students. Exam grades (and subsequent performance at university) are affected by a range of factors. Clearly one factor is time available for and devoted to study. Students from both white and minority working-class families were much more likely than their more affluent counterparts to be working long hours in the labour market and to envisage having to continue to do so whilst studying for a degree (Metcalf, 2003).

Across our questionnaire sample of 502, a third of the students from the established middle classes were in paid employment compared with two thirds of students from ‘unskilled’ households. Amongst the established middle classes only 10 per cent were working more than 10 hours but over 30 per cent of working-class students were.

Such practices make the possibility of attaining grades which would make elite universities a realistic goal easy for some and far more difficult for others. The qualitative data shed further light on this. Shaun (CCS), who was predicted an A and two C grades, was despairing about his chances of success:

“It’s all gone wrong for me. Because I’ve been getting no help from home I’ve had to find the money for rent, food everything basically and there’s no way I can get the work done anymore. I’m too exhausted”. (Shaun, Irish working class, CCS)

Fiona’s text highlights the impossibility of pursuing a course of acquiring academic distinction — entering for 4 instead of the normal 3 exams — a practice which is increasingly common within the private sector, but from which working class students like herself are excluded because of the exigencies of their economic circumstances:

“And then I started at Marks and Spencers and I was doing four days a week and trying to juggle four A levels, and the four days in Marks and Spencers, even three A levels is impossible with all that other work”. (Fiona, Irish working class, MU)

Fiona eventually drops her fourth A level. While a number of the privately-educated students were studying four A levels none of the other state-educated students in the sample were studying more than 3 A levels. In Fiona, Khalid and Shaun’s accounts we can see how structural influences, by constraining poorer students’ range of options, operate to maintain hierarchies of distinction and differentiation within the field of higher education

Exclusionary processes also operate within the field of higher education itself with far more working-class than middle-class students talking about undertaking paid employment in both term time and the vacations while studying for a degree. Rick, a white working-class further education student, while perhaps stating an extreme case, sums up a collective conundrum for working-class students currently contemplating higher education:

“Not much of a choice really, it’s either poverty or failure ‘cos I think having to work 3 days a week won’t leave enough time to do the right amount of studying, and anyway if I’m in it for the experience of learning new things I need time to be able to do that to get some enjoyment out of it so I guess its poverty”. (Rick, FFEC)

So the exigencies of working class students lives generate exclusionary processes. However, we also need to ask to what extent do young working-class people learn to exclude themselves. Schools and their institutional habituses (Reay et al., 2005) can be one source of exclusionary signals, providing a venue for circulating self-protective discourses that ‘shield’ working class pupils from aiming high, but other sources include the peer group, home, and the local neighbourhood. Young working-class individuals learn to pre-interpret possibilities from a range of signals transmitted across all these different contexts, from advice from a career teacher to commonsense understandings among the peer group that the older universities are not for ‘people like us’. As Shaun told me, his friends at school laughed when he said he was applying to Sussex University and said “you’ll never get in there, it’s full of posh people”, while Fiona, who initially wanted to apply to

Cambridge was told by her father that she had “got too big-headed for her own good”.

However, a different set of exclusionary processes emanating from the attitudes and actions of the middle classes is also played out within the field of higher education itself. We now have a situation in the English higher education system where a cultural and social hierarchy is grafted onto ‘historic’ discriminations, generating a significant minority of universities subject to ‘attributive judgements’ based upon the size of their working-class and ethnic intakes. Hierarchies of universities relate as much, if not more, to students’ class position rather than to quality of provision and teaching. Whereas in the past under an elite system all universities were held in relatively high social esteem, now the relative social and academic worth of universities is a direct consequence of the class positioning of their student bodies. Higher education applicants were aware of attributive judgments, and those with sufficient cultural and academic capital operationalised this knowledge in their decision making:

“Everyone says North London is a working class university, like a degree from there doesn’t count for anything”. (Laura, white, middle-class student)

“South Bank university has a reputation somehow of being an ethnic university and I think that’s not good for getting jobs afterwards”. (Annas, African middle class)

“My dread at first when Miriam was refusing to listen to us is that she’d unwittingly go to what is an old polytechnic, not knowing that there might be a different quality of students there as well, so she would be with a peer group who would bore her and be well below her standard. There wouldn’t be any standards to speak of if they were polytechnics before and also the way these places still draw in students. You know, some of them actually advertise on the television”. (Mrs Steinberg, white middle- class mother)

“I may be a bit snobbish in the sense that I wouldn’t like to be spending. I don’t think I could actually get on with people if they got very bad grades and then got into a bad university, due to the simple class of persons there, bottom of the intellect, and who deserved to be there academically. I like more intelligent conversation; I suppose you could put it that way. I don’t think I could get on with them very well. All my friends are relatively clever”. (Simon, white middle class)

These middle-class higher education applicants were seeking out institutions where ‘there are people like me’, avoiding anywhere with a critical mass of minority ethnic and working-class students. While the mainstream discourses of choice are primarily couched in the language of inclusion, the quotations indicate active processes of social exclusion.

One consequence is that universities like London Metropolitan, Middlesex and South Bank are increasingly pathologised for having large working-class and ethnic intakes. Bourdieu and Champagne argue that:

“By putting off, prolonging and consequently spreading out the process of elimination, the school system turns into a permanent home for potential outcasts, who bring to it the contradictions and conflicts associated with a type of education that is an end in itself”. (Bourdieu and Champagne, 1999, p 422).

Bourdieu and Champagne's 'outcasts on the inside' are now clustered largely in 'working class' universities, shunned by those fractions of the middle classes with high levels of either cultural or economic capital or both. The consequences are increasing class and racial segregation within higher education in which university schemes for widening access and participation are having little impact on wider processes of polarisation and pathologisation.

### "I'D NEVER FIT IN THERE"

#### *Psychological constraints on choice*

Social exclusion is a dynamic, interactive process that implicates both those doing the excluding and those being excluded. However, to further complicate the picture, many of the working-class students appeared to be subject to emotional as well as material constraints on their choices. For them choice making seemed to be, in part, a process of psychological self-exclusion in which traditional universities are often discounted. Middle-class white Sophia is convinced her working-class colleagues at further education college are governed by powerful emotional constraints:

"There is bigotry and bias, there is definitely no doubt about it, but people are very passionate about that in places like this, being a woman, being a single mother, being black, being gay. It is something that is a major issue for these people and they think that these things are going to be held against them when they go to interview and they feel places like UCL, King's and LSE won't want students like them but it just isn't true anymore".

However, Sophia, with "lecturers in my family" is positioned very differently within the field of higher education to most of the other mature students. The risks for working-class students are evident in Dave's words. Recalling a conversation he has had with a mature student from the previous year who went on to study at King's, the University where I work, he comments, "she said she felt quite sort of out of her class. That she didn't fit in".

"WHAT'S A PERSON LIKE ME GOING TO DO AT A PLACE LIKE THAT?"

#### *Knowing one's academic place?*

Bourdieu writes of how objective limits become transformed into a practical anticipation of objective limits; a sense of one's place which leads one to exclude oneself from places from which one is excluded (Bourdieu, 1984, p 471). Mick (FFEC), who describes himself as white working class, has rejected the more elite universities like King's because, as he asserts, "what's a person like me going to do at a place like that?" and says that he would find "going somewhere like King's daunting". Despite what the league tables say, for Mick, Roehampton is a good university because, after a negative experience of schooling, his priority is to go to an institution where he is comfortable, somewhere where there is a chance he will



feel at home within education. Many of the working-class students, particularly those on the Access courses, echo similar sentiments:

Sally: "I wasn't bothered about the league tables because I already knew where I wanted to go and I knew it was a good place".

Diane: "Good in the sense of?"

Sally: "Well, that it's the right place for me".

Here Sally exhibits a very Bourdieurian sense of place; of "one's relationship to the world and one's proper place within it" (Bourdieu, 1984, p 474). For students like Sally and, to an extent Mick, university league tables are often an irrelevance. In relation to access to higher education, students' choices are governed by what it is 'reasonable to expect' (Bourdieu and Passeron, 1977, p 226), and both Sally and Mick have developed expectations that are acceptable 'for people like us' (Bourdieu, 1990, p 64-5).

So the transcripts highlight the importance of students' psychological, as well as their financial and academic, proximity to different universities. For some students, a particular university is very definitely where they want to be:

"Once I had been there I just knew. I will be really upset if I don't get the grades which I need because now I can't really imagine going anywhere else". (Anthony, white middle class, CB)

"I just liked the feel, you know, when you just walk in somewhere and think, I could be happy here". (Carly, white working-class further education student)

The importance of choosing somewhere where one feels safe and/or happy raises the issue of risk in relation to university choice. Most of the students are applying to low risk universities where if they are from an ethnic minority, there is an ethnic mix, if they are privileged, they will find intellectual and social peers, and if they are mature students there is a high percentage of mature students

"Fitting in" is a multi-faceted process in which there are those who want to fit in and others who have to be fitted in with. The overwhelming whiteness of the university system is part of the reason why minority students across class divisions, even when they say social composition is not important, still demonstrate a keen awareness of issues around cultural mix.

### "THE GOOD UNIVERSITY"

Conceptions of "the good university" are both racialised and classed. In particular, some of the working-class students whose levels of academic achievement and material circumstances provide wider choices appear to be jostling difficult conflictual feelings about what constitutes a good university for them. Although in the main they conform to mainstream evaluations as evidenced in official league tables, they also often allude to the problems inherent in going places "where there are few people like me". Candice, a black, working-class student at MU, hints at both a collective fate she is trying to escape and concerns around her difference when she discusses her desire to go to 'a good university':

"It's been really scary thinking that you could have made the wrong decision, very anxiety inducing, I think it's more difficult if no one in your family's been there. I think in a funny sort of way it's more difficult if you're black too. Because you want

to go to a good university but you don't want to stick out like a sore thumb. It's a bit sad, isn't it? I've sort of avoided all the universities with lots of black students because they're all the universities which aren't seen as so good. If you're black and not very middle class and want to do well then you end up choosing places where people like you don't go and I think that's difficult. (Candice, a black, working-class student at MU)

Embedded in Candice's text, as well as those of other high-achieving working-class students, are complicated issues around the crossing of psychological barriers which involves recognition of "difficulties" but still allows them to aim for a university place that outstrips the collective expectations of "people like us". At the same time Candice's dilemma illustrates the ways in which class and "race" are interwoven in the higher education choice process, and how their effects can amplify and deepen anxiety, as well as, for some, offset one another. Candice displays "the anxiety about the future that is characteristic of students who have come from the social strata that are furthest away from academic culture and who are condemned to experience that culture as unreal" (Bourdieu and Passeron, 1979, p 53). In Candice's words we can see both a class and ethnic distance, at least in relation to more prestigious universities.

Julia and Lesley were two white working-class Access students applying to traditional universities. They provide us with a slightly different perspective on finding 'the right academic place'. In their rationalisations the good university is conflated with places where there are 'few people like me'. In a similar process to Candice, they have avoided universities with students like themselves. Julia argues that "the kind of place that would have accepted me for a degree isn't the kind of place that I would have wanted to go to", while Lesley ironically sums up the problem for students like herself:

"I would rather not do a degree than do my degree at the University of North London. It's a bit like, you know, that Groucho remark; I don't want to be a member of any club that will have me".

Their rationale resonates with Beverley Skegg's women students' disassociation from their current class positioning (Skeggs, 1997). Students like Julia and Lesley, whilst recognising 'their place', imbue this with connotations of deficit and were attempting to leave. For them the spaces which have opened up within higher education for minority and white working-class students were, by definition, degraded places they sought to avoid, aspiring instead to the places of more privileged others. Both were caught up in processes of disassociation from their current social positioning. As Julia said "I didn't want to go somewhere that would accept me as I was, because I'd had GCSEs and two failed attempts at A-levels".

In both Julia and Lesley's comments we can see how symbolic violence can be enacted at one's own expense (Bourdieu, 1990). There are powerful resonances with the attitudes of the working-class men in Sennett and Cobb's (1972) *Hidden Injuries of Class* and at the same time a key difference. While the stigma associated with being working class kept Sennett and Cobb's manual workers where they were, it is propelling Lesley and Julia out of working-class places and into much more unfamiliar middle class terrain. There is a complex psychological paradox here, because such acts of symbolic violence, the engagement in processes of

disassociation, are pivotal to Julia and Lesley thinking themselves into other, more privileged, spaces. As Bourdieu asserts, the insoluble contradiction inscribed into the very logic of symbolic domination means that when the dominated work at destroying that which marks them out as vulgar, such ‘submission may be liberating. Such is the paradox of the dominated, and there is no way out of it’ (Bourdieu, 1990, p 155).

However, similar sentiments to those expressed by Julia and Lesley about the unacceptability of some of the new universities are echoed by the middle-class students. For example, Keeval, a middle-class Asian student, comments:

“Basically yeah, I didn’t look at some universities at all, because I didn’t think they were a good basis for going to a job. University of Middlesex, was like, laughable”.

Yet, the feeling that universities like Middlesex are not good enough signifies very differently for working-class Candice and Julia than it does for middle-class Keeval. The middle-class students are not implicating themselves when they talk about avoiding new universities, although as Candice suggests, such avoidance is racialised as well as classed. Entwined within desires for self advancement for working-class students are difficult impulses which raise the spectre of both denial and pathology; a pathology that implicates both self and others like oneself. Such desires are far from straightforward and are often complicated by their potential for the sort of psychic damage that Skeggs (1997) describes in relation to her working-class female students.

In this tale of the perpetuation of class inequalities in access to higher education, minority ethnic students stand out as one of the contemporary success stories of widening access and participation. As Modood and Acland point out, ‘despite all the difficulties associated with migration, cultural and linguistic adaptation, racism and a disadvantaged parental occupational profile, most minority groups are producing greater proportions of applications and admissions to higher education than the white population’ (Modood and Acland 1998, p161). However, Rubina’s words encapsulate a common rationale for applying to university among minority working-class students in the sample which may go some way to explain both the motivations underlying the statistics and the inequitable racial terrain from which they emanate:

“Very soon I think having a degree is going to be a minimum requirement, very soon if you want, even just a reasonable job, if you don’t have a degree forget it. And for us, first of all we are women so we are going to be discriminated against, colour of your skin you are going to be discriminated against, so you have to be better than the best if you’re trying to get a job”.(Rubina, Bengali, working class student, CCS)

Also, despite the positive advances Modood and Acland document, minority students in particular are frequently caught up in an inescapable dilemma. Earlier research has indicated that some minority students are hesitant about entering institutions with small numbers of students or staff from their own ethnic background and desire to go to institutions with an ethnic mix (Allen, 1998; Acland and Azmi, 1998). As noted already, the higher education choice process for the minority students in our sample often involves treading a fine line between the desire to “fit in” and being stereotyped or discriminated against in majority ethnic settings. In such a scenario, choice becomes extremely difficult, painful even. Having lots of students of your own ethnicity is reassuring, and Islamic and

Afro-Caribbean societies provide a sense of home. Yet, there remain uncomfortable issues around deficit. Shuma expressed surprise that when she went to UCL for an interview, there were “all Asians there”. “I didn’t expect it because its one of the best universities” seems to suggest that she has internalised a connection between “best” and “whiteness”, at least within the sphere of higher education. However, that was not how most black and ethnic minority students approached the relationship between “race” and higher education. A number of the minority students talk about specific universities that have racist reputations:

“Yeah, he goes that it’s very white there and a bit racist, not really a good one, don’t go there” (Temi, black, middle class, CCS).

Because historically whiteness has rarely been problematised within social theory, universities have seldom been conceptualised as racialised environments. Their overriding whiteness is read as normative. Yet, as Temi’s words indicate, for many of the minority students in the sample what constitutes a “good” university cannot be separated out from issues “of race”.

However, “race” is enmeshed in wider issues of culture which include class. Fitting in and feeling comfortable appear to be dependent on a complex amalgam of factors. These, while incorporating ethnicity, are much broader, as Ong (Chinese, working class, MU) demonstrates when he tries to explain why he turned down an offer from Cambridge; a place he says all his friends thought he was mad to refuse:

“It was a complete shock, it was different from anywhere else I have ever been, it was too traditional, too old fashioned, from another time altogether. I didn’t like it at all. It was like going through a medieval castle when you were going down the corridors. The dining room was giant long tables, pictures, it was like a proper castle, and I was thinking where’s the moat, where’s the armour? Save me from this. You know, you expect little pictures with eyes moving around, watching you all the time. And I just didn’t like the atmosphere, not one bit”.

You get a sense in Ong’s words that Cambridge is worlds away from his experience, not only spatially but temporally as well. We gain a powerful sense of the alienation of class cultural differences.

## CONCLUSION

In this paper I have focused on “the English success stories”: non-traditional applicants to university, who twenty or even ten years ago just would not have considered applying to university. However, I argue that our research findings reveal causes for concern as well as reasons for celebration. The field of higher education is still far from a level playing field. Our research indicates that despite increasing numbers of working class students, in particular those from minority ethnic backgrounds, applying to university, for the most part, their experiences of the choice process are qualitatively different to that of their more privileged middle-class counterparts. The choice-making of the middle-class and working-class students are very different and the higher educations they confront and anticipate are different and separate. Class tendencies are compounded by “race”. Just as most working-class students end up in less prestigious institutions so do young people

from most minority ethnic groups. Particularly disadvantaged are those of Black Caribbean and Bangladeshi and Pakistani origin (Boliver, 2006).

As the quote from Blackburn and Jarman at the beginning of the paper shows the history of higher education in England is one overshadowed by class inequalities. It appears that the recent transition from elite to mass system of higher education has done little so far to erode class differentials in access and participation. Increased access in the English context has all too often meant increasing access not for high-achieving working class students but for those middle-class students who would not have considered university twenty, even ten years ago:

“Middle-class children have benefited far more than their working-class counterparts from the expansion of university education over the past 20 years, new research reveals today. The chance of a young person from a well-off background becoming a graduate has grown at a higher rate than that of a child from a more disadvantaged home. Bright working-class girls actually had less chance of getting a degree after the rapid university expansion of the 1980s than they did before it. Conversely, the chances of a low-ability girl from a wealthy background increased from 5 to 15 per cent (Times Educational Supplement, 2003).

What access has done is to create working class spaces within higher education, just as there have always been working-class spaces within schooling. If these places were seen to have equivalent status and prestige with middle-class places then my concern would not be quite so great. But instead they are pathologised and seen to be devalued and degraded places both, as we have seen in the quotes, by the students themselves, but just as significantly by Government and policy makers. The intractable problem of social class is just as pervasive in English higher education as it is within compulsory schooling. We have moved from an historical position of external exclusion to one of internal segregation and polarisation, a situation that the widening access and participation initiatives run by the elite universities has altered very little to date.

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# 9 Realities and Prospects for Public Education in a Context of Persistent Inequalities

## Theorizing Social Reproduction in Latin America

*Nelly P. Stromquist*

### INTRODUCTION

This chapter explores educational inequality in Latin America, a developing region with persistently vast inequalities in income and wealth. Although there exist considerable differences between countries, Latin America can be characterised as a region fractured by ethnic and racial contrasts and by substantial gaps between rural and urban areas. Access to primary education is close to universal according to official statistics, yet data on primary and particularly high school completion rates reveal that much needs to be done to increase the average level of schooling in the region. Growing evidence derived from international comparisons on cognitive performance places Latin American students, with the exception of Cuba, well below counterparts in industrialised countries and emergent economies such as Korea and Taiwan.

Against this depressing context, public policies on education have done little to counter the differential performance that results from the influence of social class, and even less to buffer the impact of poverty. Priority has been given to policies that seek to decentralise education and to measure student performance. Simultaneously, little is being done to improve the infrastructure of public schools and the quality of teachers through both pre and in-service training.

The chapter centres on the paradox of a consensual discourse that highlights the critical importance of education for a “knowledge society” and a more democratic way of life and, at the same time, practices that persist in severely under funding public education, particularly in the low wages paid to teachers. In seeking explanations, the author identifies as key elements in the process of social reproduction the role of private education in satisfying the educational needs of elite and middle classes, the still weak leverage of urban and rural workers, diffuse racism in countries with large indigenous populations or those of African descent, and the concomitant view (with few national exceptions) that public education is a charitable and residual act rather than a central national investment. This article, far from assuming a constellation of stakeholders sharing certain objectives and coming to greater consensus through dialogue, points to the existence of very different interests, which are pursued through terrains that do not bring these actors into close contact with each other.

*Theorising Inequality*

For a region with the highest wealth differentials in the world, studies of inequality have not received sufficient attention as these types of studies tend not to be salient in political agendas and academic discussions.

The notion of poverty does receive attention, but as several scholars observe, inequality and poverty are two different concepts. Plaza (2005) contrasts poverty (incomes below an established threshold) with inequality, defining the latter as: “a systemic condition regarding the way society is organised and its material and intangible resources are allocated, what patterns emerge for the distribution of profits and resources, and the rules by which such given order is legitimated” (Plaza, 2005, p. 21). Inequality thus implies a multidimensional phenomenon that comprises economic, political, social and cultural domains. There are groups that obtain benefits in all domains, some that obtain benefits in some domains, and others that obtain little in any of them.

Earlier approximations to inequality in Latin America were embedded in several versions of dependency theory and later in theories of marginality (Plaza, 2005) and cultural heterogeneity (an approach pioneered by Hart, 1973). According to these theories, inequality emerges from relations between societies, is related to exchanges of goods and services, and is susceptible to the differential technological development between central and peripheral countries. From the perspective of these theories, the pervasive force of social structures accounts for the fact that although the poor are the largest number in many countries, they are dispersed and have not been able to act as an organised group to aggregate demands and negotiate them in the area of economic and social policies (Plaza, 2005). Despite their explanatory power for the majority of low-income countries in Latin America and elsewhere, these theories were discarded in the 1980s, as there was a gradual replacement of studies of social classes by studies of social movements. Reflecting trends in intellectual discussion, including the liberating and democratising promise of neo-liberalism, the consideration of social classes has fallen out of fashion, if not into disrepute, and poverty is now conceptualised as an individual problem. While theories of dependency and marginality constituted efforts to understand society as a whole and as a force field, the focus on poverty began to shift to micro issues and thus came to centre on individual agency (Plaza, 2005). As Plaza explains, inequality should be expressed as the interaction between the individual conditions and situations of subjects and the structural dimensions that they reproduce and maintain. Understanding inequality requires understanding: (1) how society is organised as a whole; (2) the logic of institutional and organisational reproduction in society, meaning an understanding of the nature of a country’s capitalist system and how it functions; (3) and the rules for the production and appropriation of revenues (how they are produced, the kinds of ties and networks between economic sectors, how revenues are generated and distributed, the various means of extracting revenue, and the economic, political, and cultural relations within which profits are appropriated) (Plaza, 2005).



Lynch (2001) has observed that structural inequalities are endemic to hierarchies of knowledge, tracks and jobs. In her view, these hierarchies must be the subject of investigation. Otherwise studies that ostensibly look at inequalities become conservative. It has also been observed that studies of inequality ought to imply a consideration of ethical questions, for the issue of social justice is central (Lynch, 2001; Plaza, 2005).

A concept related to inequality is that of exclusion. Figueroa et al. define exclusion as “the act and outcome of preventing the participation of some social groups in aspects considered valuable to collective life” (Figueroa et al., 1996, p. 19). They then ask a critical question that seems implicitly addressed in their definition of exclusion: Does inequality emerge from a specific process of social integration or is it a product of conscious exclusion? According to Figueroa et al. (1996), exclusion operates in three different domains: economic, political, and cultural. These domains tend to reinforce each other, but it is possible for a person to face a greater degree of exclusion in one domain than in others.

Additional contributions to the concept of inequality include the identification of distributive recognition, and redistributive features it may possess. Inequality is a distributive problem when it is rooted in politico-economic systems and is further reflected in patterns of ownership, control, distribution, and consumption. It is a problem of recognition when it is based on a culturally biased system of recognition, non-recognition, and misrecognition (Lynch, 2001). These inequalities become translated into systems of inclusion and exclusion through the exercise of power. The notion of redistribution enhances the concept of inequality by pinpointing more effective ways to change the distribution patterns of a given society through more drastic measures such as redistribution of goods and services.

Coming from a very different intellectual tradition, two American scholars introduce the concept of *non-decision making* to explain the invisibility of central issues in political discussion. According to Bachrach and Baratz (1970), the absence of the voice of the rich on certain issues does not imply they are inactive in influencing decision-making. Speaking in the context of US racial politics, Bachrach and Baratz argue that dominant forces use their power to exclude certain issues from the political agenda and thus from the decision-making process from the beginning. In the context of Latin American countries, racism toward indigenous populations operates as a constant element in the disregard of their economic and social conditions. Bachrach and Baratz highlight the importance of two stages in formal policy decisions: the moment of issue formation and later of policy implementation. We can ask, therefore, how are certain grievances attended to? When are they suppressed? When are they suppressed at the moment of implementation? The non-decision making framework orients us toward paying attention to sources of power, arenas of conflict, incentives to engage in contestation, and the doctrine of legitimacy (Bachrach and Baratz, 1970). At the point of policy design, the sources of power and the arenas for conflict are certainly relevant. At the point of implementation, it becomes important to consider the potential the legislation may have to create conflict as well as the doctrine of legitimacy it embodies.

Going back to the issue of why inequality has received less attention than poverty, Plaza hypothesises that, for cultural and ideological factors, we lack the strength to develop a reflexive and critical analysis. He states:

We are not sufficiently modern to reflect on our own selves, beginning from the characteristics of our society. We always engage in a reflection mediated by other realities so we remain at the level of conceptual categories without analyzing empirically the socioeconomic processes under way or the economic and political logistics that characterise our nation (Plaza, 2005, p. 36).

### INEQUALITIES IN THE EDUCATIONAL SYSTEM

As a whole, Latin American students perform less well than their counterparts in industrialised countries and emergent economies such as Korea and Taiwan. This low performance characterises students attending both public and private schools. But beyond this low performance, Latin American students are exposed to segmented educational systems, with some attending excellent schools with modern equipment and rigorous educational systems that reach 1,200 school hours per year, in contrast with public schools in rural areas, where the number of hours seldom reaches even 400. According to the Economic Commission for Latin American and the Caribbean (ECLAC) estimates, only 25 per cent of all children between 12 and 17 who work in the cities, go to school regularly. In rural areas an even worse situation obtains: only 15 per cent of that age group are enrolled (ECLAC et al., 2001). International Labour Organisation (ILO) figures for 2004 indicate that 218 million children (ages 5-17) work in the world. Of these 48 million live in Latin America. About 1 million children worldwide work in mines and quarries; approximately 300,000 of those children reside in Latin America. It is most unlikely that these children attend school, which raises questions about the almost universal enrolment registered in the official statistics.

We need to be clear, however, that education functions to *decrease* income inequality as well as to *increase* it. Findings that corroborate the benefit of education show that educational inequality, according to the Gini coefficient of income distribution in a sample of 85 countries during 1960-1990, is negatively associated with per capita GDP growth (ECLAC et al., 2001). On the negative side, there is evidence that education itself cannot reduce inequality and even promotes serious income inequalities. In Chile, the country with the most egalitarian system in Latin America in terms of levels of schooling among people with different income levels, its Gini coefficient has maintained a stable level from 1990 to 2003 (Molina, 2004). After reviewing 49 household surveys in 15 Latin American countries during the 1990s, Székely and Hilgert (1999) found that in none of those countries was there an improvement toward income equality in that period. Lack of equality is not exclusive to Latin America; with few exceptions, inequality also increased in other developing regions and in Eastern Europe. Székely and Hilgert found that most increases in inequality were due to higher concentrations of income at the top decile of the distributions. They found also that “the dynamics among the most highly

educated are driving the lack of progress in income distribution” (Székely and Hilgert, 1999, p. 24). In other words, the lack of progress took place because of income gains among the richest segments of the population, especially the most educated individuals, defined as those with 14 or more years of schooling. A parallel study of income determinants, using a model based on 27 variables and relying on a representative sample of some 25,000 Peruvians, found that model explained only 20 per cent of the variance in income, and that education alone accounted for 43 per cent of the explained variance (Shack, 2000). Consequently, education can play a double role: to reduce poverty and inequality and to increase it. Education also generates a dislike for rural life or a lack of fit with it, driving migration toward urban areas. The growth of values in the direction of individualism and competition reduces feelings of solidarity and identification with one’s community and indirectly these attitudes do not foster concern for social equality.

Figueroa et al. (1996) examine the question of exclusion by partitioning it into economic, political, and cultural dimensions. On the basis of Peruvian data, these authors find that the economic sphere is the hardest to penetrate as it involves creation of and access to jobs and financial burdens such as taxation and the enforcement of minimum wages. On the other hand, they find that the political and social domains provide greater possibilities of inclusion. While the cultural sphere includes such aspects as racial and ethnic discrimination, it also includes language literacy, and schooling, which are more accessible through individual agency. The identification of schooling as a means for social mobility, however, is not romanticised by Figueroa et al., as they argue that the provision of education must be of uniformly high quality to enable individuals to compete on equal terms.

And it is here that we encounter the greatest challenge to education as a means to fight social exclusion. The existence of highly divergent educational provision (private elite, private low-quality, and pauperised public) makes schooling a major tool for social differentiation. A segmented education does not succeed in significantly modifying the social capital students have at the initial moment of their schooling. In this respect, although schooling is highly valued by all social classes, unless the State intervenes to equalise provision, schooling will continue to be a real, yet highly elusive, path to social mobility and thus social inclusion.<sup>1</sup>

## THE DISTRIBUTION OF EDUCATION

Latin America as a whole has low levels of social expenditure as a percentage of GDP compared to OECD countries, which of course have much greater absolute amounts (ECLAC et al., 2001). Within nations, considerable differentials emerge.

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<sup>1</sup> The empirical evidence for Peru, fortunately, gives reason for hope. It seems that through internal migration, by moving from the rural areas to medium and large cities, indigenous populations are gaining integration on a gradual, generational basis. State policies could serve to accelerate this process but, in their absence, indigenous populations are gaining a greater hold on available services, including schooling, which is substantially better in urban than rural areas.

Thus, while the Peruvian state invests \$252 per student *per year* in the provision of public schooling, a private school of medium-high quality charges \$250 *per month*, without including the additional costs of a \$300 fee at the beginning of the school year (Rivero, 2005). In the case of Chile, considered a success story until high school students confronted the government with a major questioning of the reform in June 2006,<sup>2</sup> the annual state subsidy has been about \$248 per student, and the payments for additional expenditures reached \$80 (Delannoy, 2000). Although the Chilean state has been spending considerably more than in Peru, Chilean parents with children in private schools have been spending about four times the state amount for their child's education, thereby creating educational systems with drastically different social prestige and reward.<sup>3</sup>

Educational statistics have been completely silent about the social class of students. Official data, based on administrative reports, generate information about the enrolment status of the child, but not the wealth or income of the parents. As a result, UNESCO educational statistics — still the prevailing source — make it impossible to do an analysis by class, since this variable is not measured. Similar arguments could be made for the analysis of educational provision by ethnicity. Since these data are not gathered either, the best approximation is to analyze educational statistics by urban and rural residence, a process that reveals serious imbalances. In this regard, an unusual window into the effects of social class is offered by data based on household surveys. These surveys, though based on small samples rather than the entire population, collect information on the school attendance of children and their family's socioeconomic status. Although the surveys refer to school *attendance* rather than school *enrolment*<sup>4</sup>, it is possible to calculate the degree of inequality between students of different social classes. One way is to rely on the calculation of the index of inequality, which indicates in percentage points the gap between two groups. Under conditions of total equality, the index would be 0 and, under conditions of total inequality, the index would be 100. Based on data for 42 countries across all developing regions, Table 9.1 compares high and low wealth students in two age groups (ages 10-14 and 15-19) and, within each group, estimates the index of inequality separately for girls and for boys. The data reveal unambiguously that social class in all regions considerably affects whether a child attends school. The impact of social class tends to be felt more intensely at higher levels of education (in this case in secondary school more than in primary school). Girls, with the notable exception of Latin America,

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2 The students created the slogan, "If education is a business, then the clients are right."

3 There are few studies comparing social classes; we count mostly on studies of rural communities and the urban poor. It has been observed that we know how the poor live in developing countries but we do not know how the rich live. Often Pierre Bourdieu chastized mainstream researchers for conducting studies in ways that fail to address class explicitly and leave much of it unexplored. These critics have also noted that we tend to do our interviewing downward rather than upward in the social scale.

4 Attendance shows whether the child is actually going to school, enrolment indicates whether the child has been registered to attend school. Both indicators are flawed in terms of measuring regular student participation.

encounter greater inequality than boys in access to schooling. Table 9.1 also shows that across all countries the wealthier the nation, the lower the influence of social class on school access; however, the compound impact of wealth and gender remains. A concluding argument from this illuminating table is that the provision of education is still distributed very unevenly and that it favours the rich over the poor and boys over girls

*Table 9.1: Index of Inequality in School Attendance between High and Low Wealth Students, by Age-weighted Averages\**

Regions	Ages 10-14		Ages 15-19	
	Boys	Girls	Boys	Girls
Africa				
Eastern Africa/Southern Africa	24.7	27.3	18.8	33.3
Western/Middle Africa	45.1	54.9	55.8	70.2
Asia				
South-Central/South-Eastern Asia**	20.2	25.1	52.1	63.5
Former Soviet Asia	0.6	0.5	19.5	29.2
Latin America and Caribbean				
Caribbean/Central America	24.6	24.2	52.3	61.0
South America	10.1	8.5	33.9	33.3
Middle East				
Western Asia/Northern Africa	24.1	43.8	41.7	65.7
Country Income Level:				
Low	27.2	33.7	46.5	61.8
Lower middle	18.8	21.2	42.1	43.5
Upper middle	10.5	15.7	35.9	34.6
Total: All DHS countries	23.1	28.7	42.5	54.3

\*The regional averages were computed by taking into account the population size of the countries in the region.

\*\*India's DHS data do not include enrolment data for 18-24 year olds, therefore, India is not included in the table.

Source: Lloyd, 2005, p. 77.

## STATE RESPONSE TO EDUCATIONAL INEQUALITIES

Seen in this complex context, public policies on education have done little to counter differential performance due to the influence of social class, and particularly to buffer the impact of poverty. Educational reform has been common terminology in recent decades, but priority has been given to policies that seek to decentralise education and to measure student performance. At the same time, little has been done to improve the infrastructure of public schools, the quality of teachers through both pre- and in-service training, and the economic conditions of the teaching force.

Statements of dismay in the face of poor academic performance in international testing frequently appear in the newspapers and official discourse. Since 1994, ECLAC has identified the importance that social investment, and especially investment in education, could have for tackling the problems of poverty. ECLAC findings also assert that in the Latin American context, basic primary schooling will not be sufficient, but rather we must look to secondary schooling. It has reported:

On the basis of a study of wage-earners in the most important 20-year period of their working life (between the ages of 35 and 54), it was observed that, even in the early 1990s, ten or more years' schooling were needed to have acceptable possibilities of securing well-being and having a good chance of steering clear of poverty (ECLAC/UNICEF/SECIB, 2001, p. 120).

This situation raises a fundamental puzzle: Why, despite continuous official declarations on the importance of education, is there no interest to act on it in a serious manner? As in the case of health, education receives much recognition as a crucial development goal but, when moving to policies of significant magnitude, priorities are assigned to economic growth, macroeconomic stability, and making the political climate friendly to investors through economic and regulatory measures.

Data from the *Latin American Barometer* for 1998, 2000 and 2002 (cited in Kaufman and Nelson, 2004) indicate that there is consensus on the importance attributed to various social problems. People who were surveyed across eight Latin American countries consider that the most important problem facing their nation is the labour market (referring to such issues as unemployment, work instability, low salaries, and limited opportunities for youth), and the priority assigned to this problem has increased over the three survey periods (moving from 19 per cent to 46 per cent). Second in importance by a good distance is education. And, below education, comes poverty and crime; very significantly, health receives very low ratings in terms of importance. Why do these surveys attribute a secondary role to education?

To provide a tentative reply to the issue of the low priority given to public education, it might be useful to deconstruct the stakeholders of education, paying attention to the most visible actors. It is useful to pay attention also to macro and external conditions that shape the allocation of public funds to education.

### *Parents*

At a minimum, we must distinguish between rich parents and poor parents. The former are really out of the *direct* debate regarding public schooling because their children attend private schools where their needs are respectfully addressed. Whether the needs of poor parents are addressed is a different story. How firm is the political foothold of marginalised people in Latin America? By their very condition, they do not have sufficient power, authority or influence to gain permanent access to

the political process and thus to improve their share in the overall distribution of benefits and privileges.

Elites and other privileged groups fail to act in education for different reasons. Elites have placed their children in private schools that provide excellent teaching, full bilingual programs (primarily English-Spanish), tutoring, counselling and a wide array of extracurricular subjects. According to recent PISA results, children of the Latin American elite do not seem to do exceptionally well academically from an international perspective. The results show, for instance, that in the case of Chile, children of families in the top 10 per cent income levels reach only the average academic levels of students in such countries as Australia, Canada and the UK (Carnoy, 2005). But, regardless of their academic performance in international comparisons, children of wealthy families accomplish academically much more than the children of poor families. Given the widespread notion that public education has deteriorated, the middle-classes have removed their children from public schools and placed them in less prestigious private schools, where teaching, if not much better, at least takes place for smaller groups and provides a better social mix of students (a euphemism meaning fewer children of low-income families).

Lower classes endorse the notion that education is important to attain social mobility. Often, they place more effort on the essential step of educational *access* rather than on *quality*. Most low and middle-income parents are interested in the education of their children, but such interest does not regularly translate into their mobilisation for a more adequate public investment in education.

Rich parents are not oblivious to the possible negative consequences (for them) of democratising the educational system. Speaking in the Chilean context, Garcia Huidobro (2004) classifies educational issues according to the degree of social endorsement they may receive. Three such categories are identified: (1) Areas of *possible* social consensus: preschool expansion, reducing class size in first and second grades of primary schooling, training school administrators and teachers to diagnose the distribution of academic achievement at the school level and helping them to serve poorly performing students, creating a system of lifelong education, and providing additional support to children behind their grade level. (2) Measures for which consensus needs to be built: limiting or adjusting school choice so that it does not result in social exclusion, preventing the selection of students in state-subsidised schools, orienting state support to learning outcomes, and improving state subsidies for the poorest sector of the population. (3) Measures requiring "*profound changes in the functioning of the educational system*": these include revising the shared financing formulas that produce social differences, revising the municipal administration of schooling, refining the territorial boundaries of some municipalities, increasing the institutional capacity of such municipalities, and permitting more flexibility in the state regulations that constrain teachers' work and financial resources. It is clear that the second and third sets of measures are the most likely to create significant impact on the distribution of schooling and its quality. Parents and individuals with substantial influence over others may be silent on certain issues, but as Baratz and Bachrach (1970) have noted, the power to declare some problems "non-issues" kills political action at its very root.

*Teachers and Teachers' Unions*

At the individual level, some teachers welcome educational reforms, while others do not. This seems to be influenced by their political positions and pedagogical philosophies. As an organised group, teachers' unions in Latin America have consistently played an oppositional role vis-à-vis educational reforms. Long alienated by their low salaries and by the limited participation accorded them in efforts addressing educational reform, union leaders center most of their work on securing salary increases and rarely produce resolutions or research on questions of social inequality as reproduced through the educational system (Grindle, 2004). The Inter-American Development Bank argues that teacher unions in the region oppose any accountability mechanisms and that they have an unassailable veto power (BID, 2005). Governments tend to see the union position in the same light, and an impasse emerges.

*Civil Society*

In recent years, particularly through the holding of the World Social Forums and the World Education Forums that precede them, civil society — in the form of philanthropic organisations, national and international NGOs, teacher and education networks — has taken up the defence of high quality public education for all. There have been several major global campaigns for education, including one conducted by the International Council of the World Education Forum, which expressed great concern about the effect of poverty on education, and the situation created by external debt. The widespread circulation of statements and communiqués from civil society identifies as a valid and effective strategy the design of structural and systemic responses to education. Moving beyond a minimum definition of democracy — the existence and protection of human and civil rights with regular and fair elections, and democratic institutions — civil society members in the region increasingly call for a more expansive definition, one that includes the poor and redistributes material resources. These voices are clearly articulated and enjoy strong consensus. The issue at present is how to move their discourse to arenas of implementation. The linkage between civil society and state in Latin America is weak; consequently, many good proposals fail to reach policy adoption and execution.<sup>5</sup>

External conditions, in these times of globalisation, include the persistent presence of heavy external debt and various economic measures related to it.

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<sup>5</sup> Another element of society, which some would say is also part of civil society, comprises the business sector. In this regard, entrepreneurs in Latin America have manifested interest in a higher quality educational system, but have not mobilized around major initiatives on this matter (Kaufman and Nelson, 2004).



*External Debt and Structural Adjustment Programs*

For a full decade, Latin America (as with other developing regions in the world) was subjected by international funding agencies to stern structural adjustment programs (SAPs) that, to promote economic stability in debtor countries, imposed three key measures: state deregulation, privatisation of production and services, and the opening of markets. Poverty Reduction Strategy Papers (PRSPs) have replaced the controversial SAPs. The new approaches, more widespread in Africa than in Latin America, continue to limit the degree of public investment in services, such as education and health. According to those who defend the World Bank and the International Monetary Fund (IMF) — the two enforcers of such measures — this institutional approach has been essentially productive. Thus, Kaufman and Nelson (2005) assert that in the case of several Latin American countries, educational reforms were accompanied by increases in educational budgets and, “were not related to policies of structured adjustment” (Kaufman and Nelson, 2005, p. 7).

This information contrasts with the findings by Marphatia and Archer (2005), who, after conducting case studies in eight developing countries, concluded that IMF conditionality ties — closely linked to SAPs — put a clamp on governmental spending on education (as well as on health and social welfare) and led to a decline in the improvement of schools and educational programs. An earlier study by ECLAC argues that:

“An economic policy which merely ensures macroeconomic stability and growth is not sufficient for [raising productivity]. It also requires an income distribution policy consistent with the objectives of reducing poverty and a social policy which also ensures that the whole population has access to education, health, housing and environmental sanitation services, since these form the foundation both for the quality of life of workers and their families and for their productive capacity” (ECLAC et al., 2001, p. 117).

Along the same vein, Klees (2006) notes that since the 1980s both the World Bank and the IMF have been able to introduce the concept of “budget constraint” into the governance of many countries. This notion implies that taxes cannot be increased and that the only way to obtain funds for social services is to either remove them from another sector or reallocate them within a sector. Klees finds this concept to be “without rational basis in economics to support it” (Klees, 2006, p.10) and to be purely political. Clearly, in many nations this concept is fully operational. With a restricted extractive capacity, governments are limited in their ability to increase budgets and improve services on behalf of their people.

The burden that many Latin American countries have regarding external debt rivals the expenditures they make in education (UNDP, 2005). Also Latin American governments spend much higher proportions of GDP on military budgets than on education budgets (UNDP,2005).

Two positions have emerged regarding external debt: one willing to explore the conversion of the debt to educational projects (or debt swaps)<sup>6</sup> and another that calls for a repudiation of debt. The first measure seems more in tune with current financial practices and some such measures are being proposed, particularly in Argentina. Freeman and Faure (2003) consider that debt swaps represent one of the most significant recent trends in the provision and use of external support to basic education. It remains to be seen to what extent this mechanism may serve to address the question of educational inequality.

### *The Role of International Financial Institutions*

It is undeniable that such institutions as the IMF, the World Bank, and the Inter-American Development Bank shape public policy to a considerable degree in Latin America. This influence occurs not only through financial mechanisms such as the SAPs and their successors, the PRSPs, but also through the production of studies that propose lines of action for governments to follow. These documents, seldom presented as institutional recommendations, are influential for they are presented as data-driven, produced by experts in the field, and objective. Moreover, they are distributed free of charge in many national ministries. According to several civil society organisations in Latin America, “conditions imposed by international banks, their contempt for particular national features as well as their mistaken understanding of education and educational change, has led to the fragmentation of portfolios into small groups headed by technocrats, thus weakening even more the Ministry of Education in these operations” (Pronunciamento Latinoamericano, 2004).

These financial institutions have been strong advocates of decentralisation, privatisation, and testing in education, measures that have been proposed as increasing effectiveness and reducing costs, while increasing performance and promoting quality through accountability. Empirical research about each of these claims is limited, but what is available does not confirm such hypotheses. Notable among the studies sponsored by the World Bank is one that shows impressive equity and quality gains in Chile’s education (Delannoy, 2000). What calls this claim into question is that it is precisely in Chile where some 600,000 high school students mobilised to demand that education cease being private and be returned under the direction of the central government (Estudiantes Secundarios de la R.M., 2005). It should be noted that these financial institutions endorse not only proposals that seek to foster economic growth and improve growth-promoting institutions, but also those that promote better health and nutrition and more equitable opportunities for education and employment (see, for instance, Thomas et al., 2000). In practice, however, many education loans centre on issues predefined by the World Bank,

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<sup>6</sup> Debt swaps are defined as transactions by which a party buys a country’s dollar debt at a discount and exchanges this debt for local currency that it can use to engage generally in social investments.

dealing mostly with administrative reforms rather than promoting broad equity considerations in educational systems.

### GENDER IN EDUCATION

As seen earlier, inequalities in political voice, assets, opportunities and outcomes reinforce each other. Being from a racial or ethnic minority, rural, and female certainly places an individual in the lowest rank of the social scale. Wages of non-white females are lower than any other group with whom they may be compared; this is a finding constantly reproduced in many economic studies. Data from 127 countries, covering four five-year periods, led Dollar and Gatti to conclude that failing to invest in women is not an “efficient economic choice” and “countries pay a price for it in terms of slower growth and reduced income” (Dollar and Gatti, 1999:2). Increases in per capita income were also found to lead to a reduction in gender inequality.<sup>7</sup>

Latin America presents a situation not easily understood at first sight. While there are substantial pockets of inequality in the education of rural women and those of indigenous and African descent (primarily the case of Brazil), educational statistics show that women are increasing their participation in secondary and higher education, and that more than half of the countries in the region now have a majority of women enrolled at those levels. These statistics have been used by government authorities to assert that a gender problem does not exist in Latin America and that, on the contrary the real concern should be with boys.

Educational access is crucial, but is only part of the picture. In a gender-marked society, education is often not sufficient to break social stereotypes of femininity and masculinity or to ensure comparable wages for comparable work. While higher education is increasingly more accessible to women, much of their enrolment is located in teacher training programs and in feminised fields of study rather than in science and technology, where the greatest economic returns lie. Education is positively correlated with employment in the labour force, and thus women have been increasing their employment in all countries. Even among highly educated women (those with 13 years of education or more), their levels of participation in the labour force are lower than men, showing gaps ranging from 7 to 20 percentage points. On average, women experience about twice the level of unemployment of men (Papadópulos and Radokovich, 2005).

Among policy makers and even social scientists that are not educators, there is a prevailing tendency to ignore the content of schooling. Few such influential people

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<sup>7</sup> The participation of women in the labour force in Latin America has been increasing, moving from 37.9% in 1990 to 47.9% in 2002 in the urban areas. This has been accompanied by an increase in the presence of women-led households from 23.8% in 1990 to 29.4% in 2004 (Arriagada, 2006). The consequences of these changes for daily life in private and public spheres have not been examined. Nor have public policies been enacted to address possible consequences on the increase in social inequality, as women tend to earn much less than men.

have observed that schooling experience contributes to the reproduction of gender beliefs that damage women's representation of self and their capacities. Schooling, therefore, continues to be seen as basically neutral, with very few interventions being put in place to challenge ideology and practice shaping gender roles. Consequently, education as a means to reduce gender inequality works basically through the level of schooling rather than through the construction of alternative, counter-hegemonic conceptions of self for women and men.

The mobilisation of secondary school students in Chile was accompanied by a document demanding an improved education system (Estudiantes Secundarios de la R.M., 2005). It contained the most detailed call for the treatment of sexuality in the educational programs this author has seen. Terming sexuality "a complex issue," it required that it be treated beyond its biological aspects, complaining that, "they teach you how to reproduce yourself, but not what implications sex has on a personal, emotional, and affective level" (Estudiantes Secundarios de la R.M., 2005, p. 19). It asked for psychological help and support for pregnant students, talks on sexuality, abuse, and violence, and respect for sexual orientation, with an emphasis on dialogue when addressing sexual issues in schools. These careful arguments were not mentioned in any of the newspaper coverage centring on the student mobilisation in Chile. As a group, feelings of exclusion are also high among both male and female youth. They feel that issues of great importance to them, such as dropping out of school, drug consumption, unemployment, family violence, sexuality, HIV/AIDS, and abortion are not part of the educational and political agenda. Their degree of dissatisfaction with the consideration of their problems is evident in the numerous messages that circulate on the internet among formal and informal youth networks.

### EDUCATIONAL REFORM

Overall, the state has tended to address more the issue of quality than inequality, treating quality indirectly rather than through interventions in the classroom. After reviewing various policy papers and position documents by six international organisations influential in Latin America (PREAL, World Bank, ECLAC, IIEP, IBD, OREALC) between 1998 and 2001, Krawczyk (2002) concludes that they promoted privatisation, decentralisation, school autonomy, better management of resources, and higher educational achievement. According to the former director of the UN Office for Education in Latin America and the Caribbean, the educational reforms of the 1990s concentrated on institutional changes, particularly in administrative models, so that a basic structure would precede curriculum reforms (Revista de Educación, 2001).

Decentralisation has been sought as a means to improve school autonomy and thus parental participation. Often, however, decentralised systems have been characterised by greater cost-sharing by parents, which means that poor parents have carried greater burdens than under centralised education systems. In some cases, decentralisation models have combined privatisation features. Voucher strategies, giving parents greater levels of choice in selecting schools, have been tried in Chile

and Colombia with primary and secondary school children, respectively. Subsidised private schools in Chile (as the voucher schools are called in that country) contributed to a reduction in government spending for education from 5.3 per cent of the GNP in 1983 to 3.7 per cent in 1990. This means that parents have had to contribute more to education.<sup>8</sup> In the case of the fully government paid municipal schools, parents have also made financial contributions, but a major source of inequality has been the difference in resources made available to those schools. In Colombia, the experiment with vouchers was much smaller, as these schools represented only 1 per cent of the secondary schools. The findings, however, reveal that many more wealthy than poor families were able to send their children to voucher schools (Klees, 2006), which suggests that this effort resulted in subsidising the rich over the poor.

To address the needs of very poor families, a few countries in the region have engaged in what is known as “focalised” policies, targeting the very poor. This strategy has been more a temporary and localised effort to alleviate poverty than to eliminate it through exceptional measures. De Andraca (forthcoming) reports four major interventions of this type, all of which seek to improve school access and completion. *Oportunidades* (earlier known as PROGRESA) in Mexico comprises a set of health, food, and education measures. It is reaching a considerable segment of the population; by 2003, it benefited some 4.4 million students, most of them at the primary education level.<sup>9</sup> In Brazil the *Bolsa Escola* program performed a similar function. By 2004 it benefited more than 8.3 million poor students in the eight grades of basic education and was being implemented in 99 per cent of Brazilian municipalities. Argentina has implemented the National Student Scholarship Program (*Programa Nacional de Becas Estudiantiles*). By 2002 it reached 327,055 students in 8<sup>th</sup> and 9<sup>th</sup> grade in all provinces. In Chile there has been a program called *Beca Presidente de la República*. By 2004 it had distributed 40,684 scholarships among very low-income families, granting them annually \$267 per high school student and \$534 per university student. In all, these social investments in education are minimal, as they represent 0.36 per cent (Argentina), 2.5 per cent (Brazil), and 4.3 per cent (Mexico) of the educational budgets (de Andraca, forthcoming). Two other measures seeking to reduce educational inequalities have been *Escuela Nueva* in Colombia, which sought to provide new pedagogies and teacher training for schools in rural areas, and, in Chile, the Program P-900 which provided comprehensive support to the worst performing 10 per cent of schools in rural areas (ECLAC, 2000). Both programs have registered improvement in the

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8 Various studies on the Chilean voucher strategy have reported a considerable exodus by the middle classes away from public schools and no substantial changes in academic performance of children following parental school choice (see, for instance, Hsieh and Urquiola, 2007). This underscores the persistent influence of non-school factors on learning and the need to address educational deficits through multi-sectoral strategies.

9 It offers annual stipends between \$100 and \$195 for primary students, between \$285 and \$397 for junior high school, and between \$577 and \$748 for senior high school. It represents the only program in Latin America offering special incentives to girls, as those in secondary school are offered slightly higher stipends than boys.

students served. The findings indicate that students in these schools need continuous assistance for cognitive gains to be sustained.

Without underestimating the usefulness of the measures described above, it must be said that they have not been sufficient to break the cycle of social inequality. Two elements seem to have been missing: a greater level of investment in compensatory measures so that they reach not only the extreme poor but also the poor, who constitute the majority of those disadvantaged in Latin America, and a more vigorous set of interventions in sectors that are highly complementary to education processes, such as health, employment, social security and housing. As Plaza (2005) correctly asserts, if our theoretical understanding is to be of any use, we cannot separate poverty, wealth and its distribution from the way a given nation-state is organised. Helping the poor is thus an incomplete strategy, conceptually and materially. The counterpart to inequality is equity, not welfarist-compensatory social policies.

## CONCLUSIONS

At first sight, education seems to be a widely shared value in modern society. In reality, its many stakeholders hold different and opposing interests. This divergence ends up giving schooling highly rhetorical importance, one in which eternal promises dot the official discourse but result in meagre state support. To date, none of the reforms has substantively addressed the problem of inequality, as no substantial measures have been put in place to reduce the imbalance between rural and urban schools or to diminish the social and cognitive distance between private and public schools.

Returning to our initial concern with the persistent inequality in society and the role of education, several reasons can be identified that explain why Latin American governments do not invest more in education:

- Elites are served by reasonably well performing private education systems. They do not see education as a crucial political issue.
- Many countries in Latin America, particularly those with indigenous populations, are not socially integrated and thus political leaders continue to see education as a public service rather than as a critical investment for national development and inclusion; the state is not used to making public schooling function as an effective means for social inclusion.
- External debts significantly reduce the discretionary power of national governments to invest in education. External debts also make countries vulnerable to pre-packaged advice from international lending institutions, often with mixed results.
- Current educational policies seeking to address disadvantaged populations assist very small groups and do so in minimalist ways. It is certainly not an issue of lack of resources but rather of political will to attain certain objectives.

An unresolved challenge in Latin America today is to develop a national consensus that may bring more actors from civil society into direct dialogue with

each other and then with the state to force it to respond to the growing disdain for the public school. Alliances of progressive groups are not impossible, but such alignments call for micro-level tasks which many individuals will find risky, such as choosing to send their children to public school.

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## Gender, Geographical Location and Family Income

*Alain Mingat*

## INTRODUCTION

In this paper we have two complementary objectives: the first is to describe the magnitude of social disparities that exist in the systems of education of sub-Saharan African countries; we focus on recent data but we also put these data in a time perspective. The second objective is to identify some of the factors that may explain these disparities and the impact of policies aimed at their reduction.

Social disparities in education may be read according to various dimensions. They may concern a) the schooling careers of individuals belonging to different social groups, or b) the volume of public resources appropriated by the individuals as a consequence of their schooling careers, or c) the level of learning of the students. In addition, the magnitude of social disparities as well as their social meaning may differ according to the level of schooling. In this paper, we focus on the social dimension of schooling careers allowing for variations across levels of education from primary to higher education.

Two types of empirical data can be used to describe the phenomenon under interest. The first are administrative in nature and are drawn from the school censuses carried out more or less every year by the ministries of education of most African countries; these data are compiled annually by the UNESCO Institute of Statistics. The second type of data comes from the household surveys that are carried out now on a more or less regular basis in a large number of countries. These surveys (conducted by the national institutes of statistics, often with technical and financial support of international organisations) provide relatively rich information on various social dimensions (population, health, poverty, education).

While school census data are in principle exhaustive in terms of coverage, they are often limited in the social dimensions they document: only gender is generally available. Besides, since the unit of observation is the school and not the individual, drawing inferences concerning the geographical location of pupils based on the location of their school is problematic. In primary education this inference may be correct, but this is not the case when it comes to secondary education. Finally, school census data concern only the children who are enrolled, with no direct access

to out-of-school children. By contrast, household surveys utilise a sample of the total population (though this is representative, with numbers large enough to ensure that the sampling errors remain small for not too specific groups of population). But their main strength is that they provide data on individuals that are fairly detailed on a number of social dimensions; they also provide documentation on all children irrespective of their schooling status at the time of the survey (enrolled or not, which grade), with documentation of the previous schooling career for those who are not in school at the time of the survey (ever enrolled or not, and highest grade attained).

Until the middle of the 1990s, and in some cases later still, most of the research on social disparities in schools in low-income countries was based on school census data. Since then, the increasing availability of household survey data has changed the picture, paving the way for richer descriptions and analyses. In this section, we first present estimates of social disparities in education on the basis of UNESCO data, followed by estimates based on household survey data. However, before focusing on social disparities, it is worthwhile documenting the magnitude of the structural disparities that exist in African systems of education, irrespective of the magnitude of social disparities.

#### THE QUANTITATIVE CONTEXT AND THE MAGNITUDE OF STRUCTURAL DISPARITIES IN AFRICAN EDUCATION

The possibility that the structure of the education system carries in itself inequalities is often neglected or treated in an implicit manner. We believe that this way of proceeding inappropriately limits analysis. To demonstrate this, we use a simple illustration in which the systems of education are basically characterised by a double and inverted pyramid:

- a) The first pyramid represents the enrolments and the coverage of the system; its base is generally wide (but not necessarily universal in primary grade 1) and its top very thin in the last segments of higher education. All countries in the world (and in particular those in Africa) share a pyramid shape of enrolments and coverage, even though the base, the top and the middle part may be more or less wide or thin;
- b) The second pyramid represents the amount of public spending per student; its shape is inverted compared to that of enrolments. In primary education unit costs are lowest and in higher education, where enrolments are relatively limited, they are highest. The global shape of this pyramid is similar across countries but there are significant variations from one country to another. Table 10.1 illustrates the global shape (and inter-country variations) of the two pyramids for sub-Saharan African countries.

Table 10.1: Average pyramid of coverage and unit cost in African sub-Saharan countries and dispersion across countries (year 2003 or close)

	IDA countries (GDP/capita < US\$785)		Non-IDA Countries
	Average	Dispersion	Average
<i>Coverage (% of age group at different points in the system)</i>			
1. Access to primary Grade 1	86.4	61- 100	95.6
2. Completion of primary education	51.7	27 – 81	76.3
3. Access to secondary Form 1	33.1	9 – 63	66.4
4. Completion of lower secondary education	22.1	6 – 58	53.2
5. Access to upper secondary schooling	14.4	2 – 41	40.8
6. Completion of upper secondary education	9.0	2 – 21	28.0
7. Number of students / 100,000 population (coverage %)	286 (3)	55 – 784	628
<i>Public spending per student (Per capita GDP)</i>			
1. Primary education	11.7	6 – 24	13.6
3. Lower secondary	27.3	13 – 49	16.5
5. Upper secondary	63.4	18 – 157	38.4
7. Higher	353	83 – 980	125

Figure 10.1 provides an illustration for an average IDA country of the region (IDA countries have a per capita GDP below US\$785).

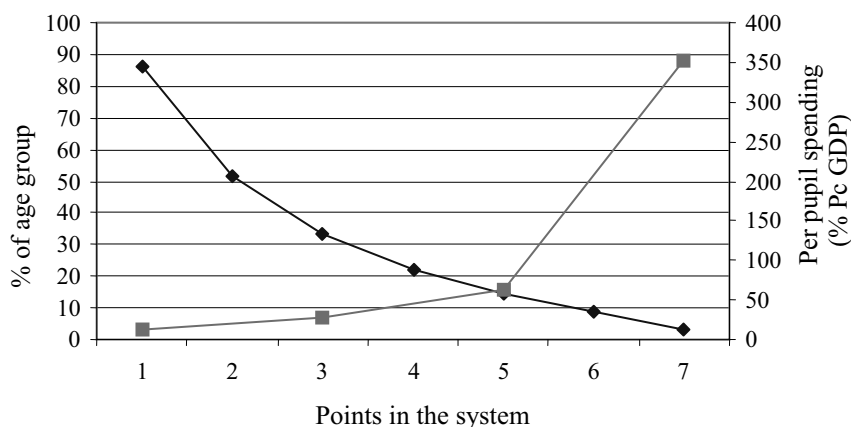


Figure 10.1: Coverage and public spending per student by level of schooling

The figure depicts the double and inverted pattern that prevails on average in low-income sub-Saharan African countries. But two points are worth mentioning: a) the wide variability across countries in both dimensions<sup>1</sup> and b) the large differences across countries in their strategic choices vis-à-vis both coverage and per pupil spending at different levels of schooling. For example, the unit cost of higher education is more than 70 times that of primary education in Burundi, Ethiopia, Mozambique and Rwanda while it is hardly more than 10 times primary education spending in Benin, Cameroon, Côte-d'Ivoire, Mauritania and Zimbabwe. In addition, within the first group of countries (high cost of higher education by comparison to that of primary education), we observe that Mozambique has a low coverage of higher education (55 students per 100,000 population) while Ethiopia has a higher education coverage, four times as large. Similar differences are seen in the second group of countries. Ultimately, very different spending patterns are observed in low-income sub-Saharan countries<sup>2</sup>.

The variations in these patterns are such that they lead to substantial differences in the degree of concentration of public resources in education in the different countries of the region. The reason is that we consider that the individuals enrolled at a given level of education during a given year appropriate *de facto* the corresponding unit cost of the services they receive. The pyramidal structure of enrolments implies wide differences in the number of years of education that individuals have received when exiting the system; some individuals have no schooling while some others have spent more than 15 years in the system before entering the economically active period of their life. Those with no schooling have not appropriated any public resources, but the longer the studies the larger the amount of public resources an individual has been able to appropriate. Since unit costs increase rapidly with the level of schooling, it follows that the happy few who reach the top of the enrolment pyramid may have accumulated very large amounts of public resources.

For the system as a whole and for a given age cohort, it is clear that one has to expect a certain degree of concentration in the distribution of public resources on education. As the two pyramids (that of enrolment and that of per pupil spending) differ substantially from one country to another, one would also expect that this degree of concentration of public resources on education differs substantially across the different countries of sub-Saharan Africa.

To measure this degree of concentration in the appropriation of public resources in education, a common practice consists of estimating for each country a) the distribution of the terminal level of schooling in a given cohort, b) the amount of

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1 For example, the primary completion rate varies from 27 to 81 per cent while the number of students per 100,000 population ranges from 55 to 780. Similar variations are recorded in the unit cost, which varies from 6 to 24 per cent of per capita GDP in primary education and from 0.83 to 9.8 times per capita GDP in higher education.

2 Generally speaking, non-IDA countries (South Africa, Namibia, Mauritius and Gabon) are characterized by a much better coverage than that of low-income countries; their unit costs are higher in primary education but their relative costs (in per capita GDP unit) are significantly lower in post-primary education, and in particular in higher education.

public resources accumulated by an individual according to his or her terminal level of schooling, and to construct c) the Lorenz curve of the global distribution of public resources for the sector. On this basis, two synthetic indicators are generally calculated: first, the Gini coefficient and, second, the proportion of total public resources for the sector appropriated by the 10 per cent best educated within the cohort. The numerical values of these two indicators are relatively well correlated ( $R^2$  around 0.75).

Table 10.2 presents the average values of the two indicators, as well as the magnitude of their dispersion between the different countries of the region.

*Table 10.2: Degree of concentration of public resources in education in sub-Saharan African countries (in 2003 with time comparisons)*

	Average	Variations
<i>IDA countries</i>		
<i>Gini coefficient</i>	0.52	0.29 – 0.69
<i>% of public resources for 10 % + educated</i>		
<i>in 2003</i>	43.0	23 – 68
<i>in 1992</i>	56.0	
<i>in 1975</i>	63.2	
<i>Non IDA countries (2003)</i>		
<i>Gini coefficient</i>	0.30	
<i>% of public resources for 10 % + educated</i>	24.8	

The Gini coefficient can *a priori* vary from 0 (characterising an equitable distribution in which x% of the population appropriate exactly x% of public resources, this holding for any value of x) to 1 (characterising a theoretical case in which one single individual appropriates all of the public resources for the sector; maximal degree of concentration). The Gini coefficient is the most frequently used indicator, but we prefer to focus on the proportion of total resources appropriated by the (conventionally) 10 per cent best educated of the cohort; this measure has more social meaning than the Gini coefficient, the interpretation of which is very abstract. The estimates made in low-income sub-Saharan countries show that on average in 2003 the 10 per cent best-educated received 43 per cent of the total resources for the education sector. They also show that this statistic varies quite substantially across countries (more or less between one quarter and two thirds) as one would expect, given the wide variability in the structural choices described above. In about one country out of three, more than half of public resources in education are appropriated by only 10 per cent of the population of the country; these figures depict quite a high level of concentration of public education resources in low-income sub-Saharan countries.

This is confirmed by a comparison between the low-income and middle-income countries of the region: while low-income countries spend on average 43 per cent of education resources on the 10 per cent best-educated students, middle-income countries spend only 25 per cent. However, it is also important to consider how the

situation of low-income countries has changed over time; significant progress has been accomplished since 1975, the indicator showing a decline from 63 per cent in 1975 to 56 per cent in 1992, and to 43 per cent in 2003. This evolution demonstrates the law of the sociology of education according to which when the coverage of a system increases, inequalities tend to diminish. This law comes from the fact that in the systems with low coverage, resources are (tautologically) appropriated by a small segment of the population (we will note later that this segment is made of the most privileged individuals) and that, with expansion, a larger proportion of the population is included, reducing *de facto* the degree of exclusiveness of the first served. This tends to be all the more so as it is observed that the structure of unit costs, which is often characterised by very wide disparities across levels of education in countries with a low coverage, tends to even out when coverage expands.

In this section, we have established the existence of relatively strong structural disparities in sub-Saharan African countries, together with significant differences on this count from one country to another. But these disparities are not necessarily socially discriminatory. One can, for example, imagine a very elitist system with no social bias and a very equitable access to the most desired segment of the system, but it is within this structural shell that social disparities are likely to emerge and there is obviously a possibility that a system with a degree of structural inequality also contains a high level of social disparities. The focus of our analysis will now be on the description of social disparities at school. We will first use school census administrative data to conduct the description and the analyses. We will then consider data from the household surveys.

#### GENDER DISPARITIES USING ADMINISTRATIVE DATA

As long as coverage at a given point in the system is not universal, possibilities exist that some groups will be advantaged or disadvantaged in a systematic way. Disparities according to gender have received special attention over the last twenty years. There are obviously many good reasons for this interest ranging from the question of rights to aspects of efficiency, given the demonstrated impact of girls' education upon population and health behaviors and outcomes at an adult age. This is why gender disparities have attracted the attention of both researchers who wanted to describe and analyze them and practitioners (national policy makers, international organisations such as UNICEF, constituencies for the cause of girls and women) who wanted to reduce them. But opportunity also played a significant role in the attention to gender disparities since gender was often the single dimension for which wide documentation was available; the urban/rural dimension or the distinction between rich and poor is not included in school census administrative data<sup>3</sup>.

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<sup>3</sup> The dimensions of disparities that can be measured with administrative data are mostly gender and region (or province). Only gender disparities are generic enough to be assessed on a comparative basis across countries. This is not the case for regions or provinces as they are

Table 10.5 (at the end of chapter) presents the basic data concerning gender at the different levels of education in a large selection of sub-Saharan African countries for the years 1990 and 2002, (or close to these years). The main conclusions that emerge from the analysis of these data are the following: a) gender disparities are often present in primary education, but they tend to increase at higher levels of education; b) gender disparities have been on average substantially reduced over the last 15 years and c) wide differences exist between countries in the magnitude of gender disparities in schooling.

*A relatively strong overall pattern*

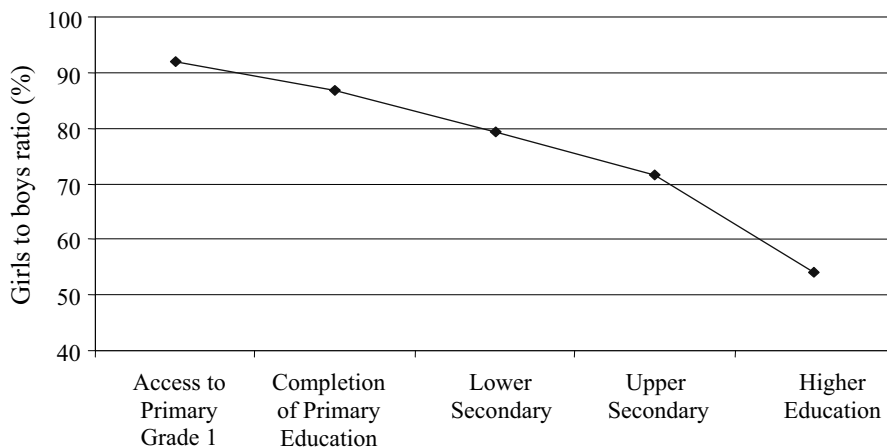
To start with, one can observe as a global picture that gender disparities do exist in the different countries of the region in 2002, and that girls are generally discriminated against.

If we focus first on primary completion, which is considered a minimal reference for poverty reduction and the Millenium Development Goals (it should be remembered that only 52 per cent of a cohort reach the last grade of primary education in low-income sub-Saharan countries), we observe an average gender ratio of 0.867, meaning that for 100 boys completing primary education we find only 87 girls (which means in turn that the majority of girls in these countries do not even complete primary education). In turn, we observe that it is more due to lower access to primary grade 1 (gender ratio of 0.92) than to retention (gender ratio of 0.94) that girls lag behind boys in their chances of completing primary education.

Disparities between boys and girls exist at the primary level, but it is mostly in secondary education that the gap begins to widen significantly, as illustrated in Figure 10.2.)

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specific to each country. This does not mean that disparities do not exist for these dimensions, nor that describing and understanding them is not of interest.



*Figure 10.2: Girls to boys ratio at the different levels of schooling  
(Average for the sub-Saharan low-income countries, 2002)*

While the numerical value of the gender ratio is 0.87 at the end of primary school, it drops to 0.79 in lower secondary education and to 0.72 at the upper level, indicating a progressive increase in the disadvantage of girls vis-à-vis boys. When it comes to higher education, the figures suggest a strong increase in the disadvantage of females with an average gender ratio that stands at only 0.54 in 2002; while we find more or less three girls for every four boys in upper secondary education, there is on average only one female for every two males in higher education.

#### *Wide differences across countries: common patterns versus country specificities*

The average pattern described briefly above often leads to generic explanations that do not take into account the possibility that things may be different from one country to another. This is indeed what is effectively observed, which obviously leads to less clear-cut and more contextualised statements.

We focus first on completion of primary education. The regional average of the gender ratio (female to male) at this point in the system is estimated at 0.87 in 2002; but the figure for individual countries ranges from 0.47 to 1.35. Even though any grouping of countries is to some degree arbitrary, one can suggest that of the 41 countries for which the data are available, 14 can be said to suffer from a fairly high degree of gender disparity (gender ratio below 0.75); however, there are 15 countries for which the notion of disadvantaged access for girls is not empirically valid (as far as the completion of primary education is concerned) since the gender ratio exceeds 0.95 (it even exceeds 1 in 10 countries where boys are lagging behind girls). In



between these two groups, 12 countries have a gender ratio between 0.79 and 0.95; in this group of countries, girls are lagging behind boys, but the gap is relatively modest. In spite of the arbitrary nature of the country grouping, there is no doubt that the countries of sub-Saharan Africa do differ significantly in terms of gender disparities.

These observations call for two types of question: the first is to whether what has just been documented for primary completion has some validity for the system as a whole; the second questions the origin of the differences, which leads us to examine the respective roles of a) country specificities vis-à-vis the schooling of girls, and b) the level of coverage of the education system which is necessary to reduce the magnitude of gender disparities.

Concerning the first point, we observe strong correlations between the gender ratio at primary completion with those for upper secondary education and higher education. Similarly, a global indicator calculated over the whole system of schooling leads to a country grouping which is very close to that constructed on the basis of the data for primary completion.

These results suggest that country specificity does exist and that in some countries, contextual factors work against the schooling of girls, while in other countries these factors do not exist or are much weaker, or begin to exert an influence only at higher levels of education. Among the countries where there is no disadvantage for girls (group 1 in figure 10.3), we find South Africa, Botswana, Cape Verde, Lesotho, Madagascar, Mauritius, Namibia and Swaziland (mostly countries from southern Africa). The group of countries where disadvantage for girls is strongest (group 3), consists of countries such as Benin, Burkina Faso, Chad, Congo, Côte-d'Ivoire, Eritrea, Mali, Mauritania, Niger, Tanzania and Togo<sup>4</sup> (mostly francophone countries). Figure 10.3 contrasts the average pattern of gender disparities at the different levels of schooling of groups 1 and 3 (all the other countries are in group 2, the behavior of which is close to the average of the region).

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4 For Mauritania and Tanzania, the disadvantage of girls appears mostly after the end of primary education.

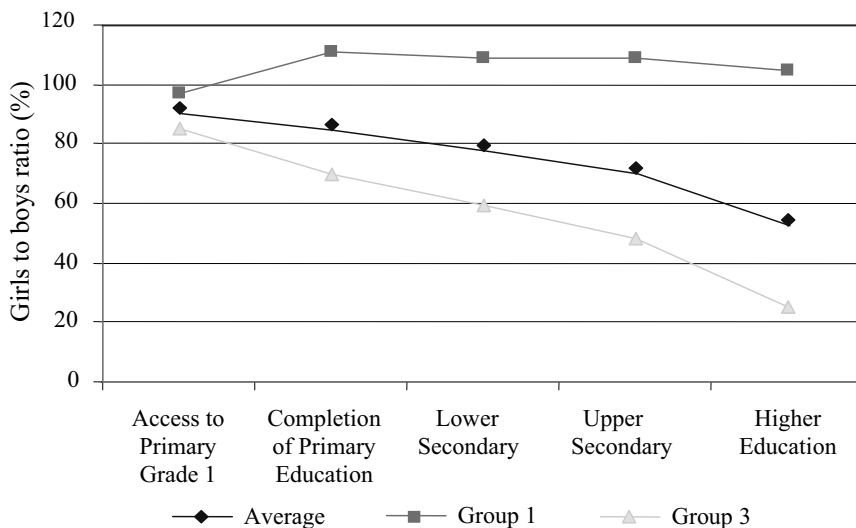


Figure 10.3: Wide variability across African countries in terms of gender disparities in school

Note: The text describes countries in groups 1 and 3; all other countries are in group 2, which is close to the regional average

Concerning the second point: after the magnitudes of gender disparities have been identified at the country level, one can try to determine the extent to which they are linked to the level of coverage of the system of schooling in that country. If we take an extreme perspective, we know that social disparities in participation, whatever their nature, are linked with coverage since when coverage is universal, they cease to exist. It is only when provision is not universal that the characteristics of those who are included may differ from those of the individuals who are excluded. Beyond this truism, one can anticipate that social disparities in general, and gender disparities in particular, will on average be more intense as coverage falls.

On the basis of this argument, it seems possible that the differences reported across countries in gender disparities may be linked partly to differences in coverage and partly to other factors (that can themselves be country-specific or not). The analysis can, for example, be conducted at the completion of primary education. Figure 10.4 below shows the different countries of the region both in terms of the proportion of the age group that complete primary education (that is, coverage), and of the magnitude of gender disparities at this point in the system.

The figure is relatively clear: on the one hand, there exists a trend whereby gender disparities are more intense when coverage is lower (the trend is indicated by the curve in the figure); on the other hand, we can identify strong differences in

gender disparities between countries with a similar level of coverage (suggesting the existence of country-specific factors). Countries such as Ethiopia, Guinea, Madagascar, Mali and Rwanda all had completion rates around 40 per cent in 2002, but they differ strongly in the magnitude of gender disparities: for example, while Ethiopia, Guinea and Mali have a gender ratio around 60 per cent, it stands at almost 100 per cent in Madagascar and Rwanda. This suggests the existence of a mixed pattern compounding country-specific factors with a general factor associated with coverage: the lower the coverage of the system, the larger the gender disparities tend to be (and probably other disparities as well).

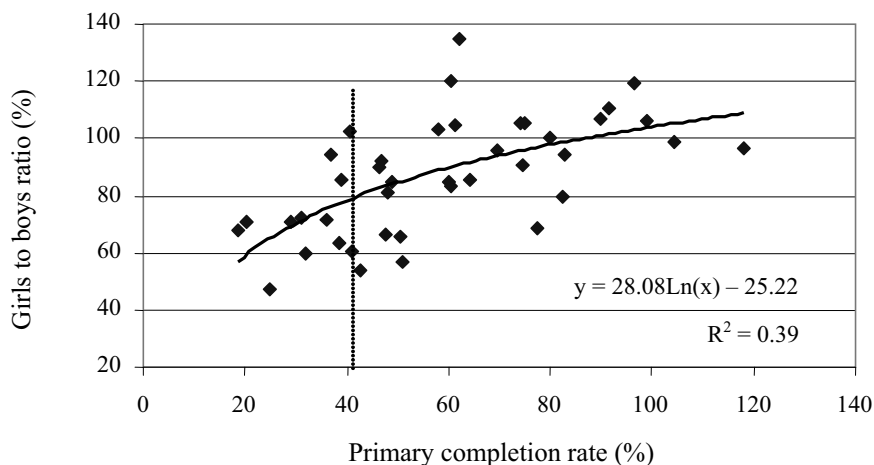


Figure 10.4: Gender equity versus global coverage at the end of primary education, 2002

The same type of argument may be developed to describe the disparities between boys’ and girls’ participation in secondary education as well as the differences in their magnitude between the different cycles of study. An immediate observation (Table 10.5 and Figure 10.2) is that the magnitude of gender disparities increases between primary and secondary education and that within secondary education it is larger in the second cycle (upper secondary) than in the first one (lower secondary). Beyond the explanations traditionally proposed on this theme<sup>5</sup>, it remains possible that the difference in the magnitude of gender disparities between these cycles of study is linked to the fact that coverage of primary education is always larger than

5 The explanations commonly used to account for this pattern are that access to secondary education corresponds to the age of puberty and also implies (in particular for children in rural areas) that children move to a school located far from home. Without taking into account the prevalence of precocious marriage, it has been suggested that parents are reluctant to let daughters go to school away from parental supervision; enrolment far from home also implies an economic loss for the family given that the girl will contribute less to the household economy.

that of secondary education. That is, the pattern of gender inequality is similar for primary and secondary education. In particular, we contend that:

- a) the average level of gender disparities in a cycle of study is not principally related to the level of education, but to the coverage of the cycle, that is to the global degree of exclusion of individuals that the level of coverage implies. In other words, we hypothesise that there exists a general, single relationship between gender disparity and coverage that would hold both for primary and the two cycles of secondary education. That is, gender disparities in a given country could differ substantially in primary and secondary education (disparities being larger in secondary than in primary education) but these differences would primarily reflect the fact that coverage is usually much smaller at the secondary than at the primary level; the same type of relationship could also account for the reduction of gender disparities over time.
- b) the country-specific dimension of gender disparities is homogenous and country specificities express themselves in a more or less similar way at the different levels of schooling.

These two hypotheses can be tested empirically to assess their accuracy.

A straightforward way of testing the hypothesis that coverage largely determines the magnitude of gender disparity consists of regrouping in a single file (by concatenation) the data on both coverage and gender ratio for primary, lower and upper secondary education<sup>6</sup>. The following model is then estimated:

$$\text{Gender ratio} = a_0 + a_1 * \text{Ln (GER)} + a_2 * \text{Sec1} + a_2 * \text{Sec2}$$

In this expression, the dependant variable is the gender ratio (in percentage) in the GER at the different levels of schooling. Explanatory variables are on the one hand the logarithm of the GER of each country at each of the three levels of schooling under consideration (primary education, lower and upper secondary education) and on the other two dummy variables (numerical value of 0 or 1) used to authorise the possibility of a difference between primary education and each of the two cycles of secondary education in the magnitude of gender disparities where the level of coverage of the system is controlled for. The results are as follows:

$$\text{Gender ratio} = 26.3 + 13.9 * \text{Ln (GER)} + 3.9 * \text{Sec1} + 11.1 * \text{Sec2} \quad R^2=0.24$$

(t=5.0)                      (t=0.7)                      (t=1.6)

These results call for various comments:

- a) this equation first allows the identification of a general law according to which disparities in education (here gender disparities) tend to be larger when coverage is lower.

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<sup>6</sup> In this file, each country is represented by three observations, corresponding to its data on GER and coverage at the three levels of schooling. The country file contains about 40 countries, the file analysed here therefore has about 120 observations.

- b) the estimate also suggests that there is no significant difference between primary and lower secondary schooling in the magnitude of gender disparities when controlling for coverage at the two levels of schooling. This means that the increase in gender disparities between the two levels of schooling is on average essentially the outcome of a lesser coverage in lower secondary than in primary education (GER of 42 per cent in lower secondary education against 92 per cent in primary education). Consequently, there is no need for recourse to cultural arguments to account for the increase in gender disparities when children reach lower secondary education.
- c) if we focus now on upper secondary education, the raw picture (as seen in figure 10.2 above) is that gender disparities are clearly stronger than in primary education. In the model presented above, the coefficient of the dummy variable for upper secondary education instead of being negative is positive (and statistically significant at the 10 per cent level). There is no contradiction between these two observations, even though it may be relevant to bring another empirical argument to the discussion. First, there is no contradiction since in reality the coverage of upper secondary education is much lower (19.6 per cent) than that of primary education (92 per cent); a consequence is that one would expect that the picture offered by the coefficient of the Sec2 variable in the model differs from what is visible in figure 10.2 since a) the model indicates that coverage has a significant influence on the phenomenon under study and b) the control indicates that the difference in coverage is accounted for. Of course, this does not explain why the coefficient of Sec2 is positive, implying that, controlling for coverage, gender disparities are even lower in upper secondary than in primary education. A likely explanation (as we will see later on in this paper) is that the population in school at upper secondary level is wealthier than that of primary education, and that gender disparities tend to be stronger when the family is poor than when it is rich.

*A positive evolution over time but with little impact due to targeted policies*

Table 10.2 above presents data on gender disparities at the different levels of schooling for both 1990 and 2002. It can be used therefore to describe changes in gender disparities over time. Figure 10.5 illustrates the changes that took place over that period.

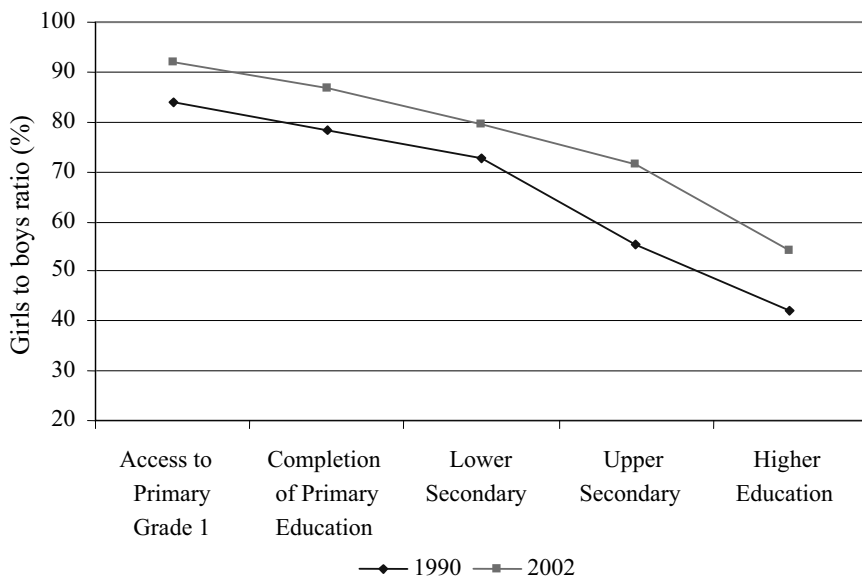


Figure 10.5: Disparities between girls and boys by level of education, 1990 and 2002

A sizeable reduction in gender disparities can be clearly observed over the period and this is visible at all levels of schooling. For example, the gender ratio of girls to boys increased from 0.84 to 0.92 in access to primary education and from 0.78 to 0.87 at completion of that cycle. In secondary education, similar improvements can be seen, the gender ratio improving from 0.73 to 0.79 over the period at the lower level and from 0.56 to 0.72 at the upper level. One needs to keep in mind that the data reported in Figure 10.5 are cross sectional for each level of schooling at the two points in time (that is, the group of individuals for which we observe the gender ratio in secondary education does not belong to the same cohort as the group of individuals enrolled in primary education at the same date). Given the cross-sectional nature of these data, the results suggest that the gender gap within a given generation widens less than is apparent in the figure. We can also observe from Figure 10.5 that the magnitude of gender disparities at a given level of schooling in 2002 is very similar to that observed 10 years earlier at the preceding level of schooling (for example, gender disparities in upper secondary education in 2002 have more or less the same magnitude as those observed at the lower secondary level in 1990).

Inasmuch as the reduction of gender disparities has mobilised a lot of energy and resources over the last 20 years<sup>7</sup>, it is tempting to suggest that the reduction in

<sup>7</sup> For example, the creation of the Forum of African Women for Education, the UNESCO International Center for Girls' Education in Africa, the CEDEAO Network for Girls' Education, the UN Initiative for Girls' Education, multiple projects and advocacy campaigns by UNICEF, the creation of units for girls' education in most African countries, and

gender disparities displayed in Figure 10.5 is the outcome of all these initiatives; this, however, is not proven. The reason, as previously noted, is that the magnitude of gender disparities tends on average to decline as coverage increases and that if the magnitude of gender disparities has declined between 1990 and 2002, coverage of education has also, on average, improved.

In this context, we can distinguish two components to account for the reported reductions in gender disparities. The first is almost mechanical and would be associated with the increase in coverage and linked to general educational policies to expand coverage. The second component would be specific and correspond to the impact of policies and projects developed to improve the chances of girls in school. If we focus on the first component, we move over time along the relationship between coverage and gender disparities as coverage improves. Turning to the second component, we would anticipate an upwards shift in the relationship with an improvement in the participation of girls for a given level of coverage. To separate out the two components, two empirical methods can be used: one consists in analysing separately the data for 1990 and 2002 and contrasting the two estimates; another consists in analyzing together the data set for the two years and testing the existence and magnitude of a systematic difference between the two sets of data. We use these two methods.

1. We estimate separately for the years 1990 and 2002 the average relationship between the gender ratio and the logarithm of the coverage, first for primary education. Then, on the basis of the equation estimated for the two dates, we run a numerical simulation and plot the curve obtained for each of them into a single graph (Figure 10.6).

A straightforward examination shows that the two curves are very close, suggesting that the specific component is at best weak, and that most of the progress reported in gender disparities between 1990 and 2002 results from the increased coverage of the system. But beyond this first strong visual impression, it is important to carry out a more objective test; this is what is proposed with the second method.

2. We regroup in a single file the data for the different countries and the two dates, 1990 and 2002, and we test the existence of a general relationship between coverage and the gender index, using a dummy variable that identifies whether the data is for the year 1990 or 2002. With this method, the coefficient of the dummy variable, and its level of statistical significance, indicate the magnitude of the impact of the specific initiatives undertaken for girls' education over the period under consideration. The result is that the coefficient, whose numerical value is very small (less than 1 per cent), is not statistically different from zero. It is therefore safe to conclude that the reduction in gender disparities in primary education over the period 1990-2002 results mostly from increases in coverage and from the policies that have made them possible, and very little from specific policies geared to girls' education.

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mobilisation of resources targeted to the reduction of gender disparities in most bilateral and multilateral projects.

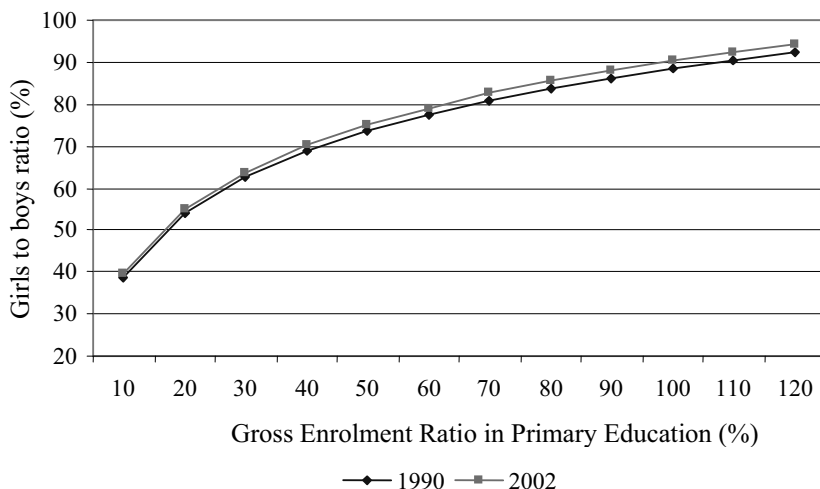


Figure 10.6: Average relationship between coverage and gender ratio in primary education, Years 1990 and 2002

A similar type of analysis was conducted for lower secondary education; the results obtained are similar to those reported above for primary education. In total, it seems safe to conclude that specific targeted policies to increase girls' participation levels have not carried the benefits anticipated. These results obviously have some implications for further thinking and action in this domain.

#### *A synthesis on gender disparities*

In brief, the results obtained so far on gender disparities in education suggest that:

1. Gender disparities can be substantial in sub-Saharan Africa, but this is not true for all countries. In some countries (in particular in the southern part of the continent) girls' participation is not really lagging behind boys', but in most, girls' participation is somewhat lower, and in some countries the gap is fairly large. This suggests that caution should be used in making generic statements about girls' participation in the countries of the region;
2. In countries where girls are at a disadvantage, the more limited the coverage, the greater the disadvantage they suffer;
3. While coverage strongly affects participation, sizeable differences also exist across countries in terms of gender disparities when controlling for coverage; this suggests that cultural and societal contexts, or specific education policies in individual countries, also play a role;
4. While gender disparities increase with successive levels of education, this is largely because coverage decreases as we get higher on the educational ladder (and in general, social disparities are larger when coverage is



- smaller). Common cultural and social arguments are not necessary to account for the pattern that sees gender disparities increase with the level of education.
5. Gender disparities have declined significantly between 1990 and 2002, and this statement holds for all levels of education; a joint observation is that the magnitude of the lag of girls vis-à-vis boys at a given level of schooling in 2002 is more or less similar to that observed 10 years before at the level of schooling immediately below;
  6. Finally, the relative increase in girls' participation in both primary and secondary education between 1990 and 2002 is essentially related to increases in coverage and to general educational policies to this end; specific policies to increase girls' participation appear, on average, to have made virtually no impact.

### SOCIAL DISPARITIES GOING BEYOND GENDER: THE CONTRIBUTION OF HOUSEHOLD SURVEYS

Over the last 10 years, and in association with the focus on poverty, a large number of household surveys have been conducted in sub-Saharan African countries. Even though the focus is not on education *per se*, the surveys provide valuable information on (past or present) schooling of all members of a large number of households in samples that are representative of a country's population; in particular, they provide a large array of data on the economic and social characteristics of households and their members.

Table 10.3 presents a straightforward description of the social distribution of individuals in the 5 to 24 age group in 26 countries<sup>8</sup>, including schooling status, gender, geographical location (urban/rural) and family income (quintiles of income or wealth). This table also provides an overview of social disparities in education and helps weigh the role of gender, geographical location and family income in social discrimination. It also illustrates how disparities widen as the level of schooling increases.

It is always problematic to compare directly the impact of different factors on disparities since this requires the use of similar segments of the population to conduct the comparison. To convince the reader of the relevance of that point, we focus on the variable 'income'. If we wish to assess the extent to which family income is associated with disparities in participation, one would choose a grouping of households and compare average participation levels across the groups that have

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8 These surveys are either DHS (Demographic and Health Surveys) or MICS (Multiple Index Cluster Surveys) conducted since the year 2000. The data presented here are a consolidation of similar analyses conducted on the following countries: Angola, Benin, Burkina Faso, Cameroon, Central African Republic, Congo, Côte-d'Ivoire, Ethiopia, Gabon, Gambia, Ghana, Guinea, Equatorial Guinea, Kenya, Malawi, Mali, Namibia, Niger, Nigeria, Uganda, Rwanda, Senegal, Sudan, Tanzania, Zambia and Zimbabwe.

been identified; however, decisions on the size of the groups compared have a strong impact on the magnitude of the disparities. So, if one contrasts children belonging to the richest 1 per cent of the population with children belonging to the poorest 1 per cent, it is likely that the gap in the chances of being enrolled in school will be very large. However, within the same population, the gap would probably have been much smaller had the analysis compared the chances of being enrolled for the richest 10 per cent to those of the poorest 10 per cent; the gap would probably be further reduced if we compared the richest 40 per cent to the poorest 40 per cent. In each case, it can be said that an estimate of income disparities in education has been performed, but one needs to remain conscious that the measure obtained is basically contingent on the size of the groups chosen to run the calculations.

In the case under consideration, the grouping is both natural and exogenous for gender and geographical location. For gender there are only two groups to compare, and these groups represent more or less 50 per cent of the population; for geographical location, the distinction between urban and rural is obviously partly a convention, but was operationalised during the development of the surveys<sup>9</sup> and the analysis described here was conducted using the available data. On the consolidated sample of the 26 countries analysed, rural settings represent about 65 per cent<sup>10</sup> (35 per cent for urban). With a choice constrained at 35-65 per cent for geographical location and 49-51 per cent for gender, in considering income we opted for a formula of 40-40 per cent that contrasts the case of children in the 40 per cent richest and poorest families (lowest and highest two quintiles), so as to divide the population in a similar way to that of the two other variables.

On the basis of these three partitions of the population, it is possible both to examine how the magnitude of the disparities varies with the level of education, and to compare the magnitude of these disparities across the three factors. Even from a casual observation, there is no doubt that geographical location and income generate much wider disparities than gender does. For example, if we focus on upper secondary education, the children from rural areas represent only 29 per cent of enrolments while they make up 65 per cent of the population. Similarly, children from the lowest two quintiles, who represent 40 per cent of population, account for only 10 per cent of enrolments; by contrast, the children from the richest 40 per cent of the population account for 78 per cent of enrolments. The variations according to gender appear much narrower.

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9 The criteria chosen in the different surveys are not necessarily exactly the same in each survey.

10 These proportions vary considerably from one country to another (the urban population represents about 15 per cent in the household survey for Ethiopia but 70 per cent for Gabon), both for objective reasons and as an outcome of differences in the conventions that may have been used in the different countries to separate out urban and rural.

Table 10.3: Distribution of individuals 5 to 24 according to gender, geographical location, family income and level of schooling at the time of survey (consolidation 26 countries, 2000-2005)

Population group	Level of schooling at time of survey											
	Not enrolled		Primary		Lower secondary		Upper secondary		Higher		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
<b>Quintile of income</b>												
Lowest	72097	23.7	30114	16.5	2004	7.2	233	3.6	30	2.2	104478	20.0
Second lowest	66019	21.7	34615	19.0	3320	12.0	468	7.2	48	3.5	104471	20.0
<i>2 lowest quintiles</i>		45.4		35.5		19.2		10.8		7.7		40.0
Average	62595	20.6	36729	20.1	4361	15.7	698	10.8	91	6.7	104476	20.0
Fourth quintile	57078	18.8	39816	21.8	6185	22.3	1172	18.2	223	16.4	104473	20.0
Highest	46518	15.3	41269	22.6	11858	42.8	3880	60.1	964	71.1	104487	20.0
<i>2 highest quintiles</i>		34.1		44.4		65.1		78.3		87.5		40.0
<b>Total</b>	304307	100.0	182543	100.0	27728	100.0	6451	100.0	1356	100.0	522385	100.0
<b>Gender</b>												
Female	163061	54.0	89176	48.5	13437	47.1	2826	41.8	587	42.5	266113	50.9
Male	138880	46.0	94693	51.5	15072	52.9	3929	58.2	794	57.5	256341	49.1
<b>Total</b>	301941	100.0	183870	100.0	28508	100.0	6754	100.0	1382	100.0	522454	100.0
<b>Geographical Location</b>												
Rural	213717	70.8	114314	62.2	10855	38.1	1946	28.8	358	25.9	341190	65.3
Urban	88258	29.2	69568	37.8	17652	61.9	4807	71.2	1024	74.1	181309	34.7
<b>Total</b>	301974	100.0	183882	100.0	28508	100.0	6754	100.0	1382	100.0	522500	100.0

Another way of illustrating this is to calculate the relative chances of participating in a given school level, comparing the groups under consideration. Table 10.4 presents the relevant figures.

*Table 10.4: Relative chances of being in school at the different levels of schooling in the different social groups (consolidation 26 countries, 2000-2005)*

<i>Population group</i>	Primary	Lower secondary	Upper secondary	Higher
<i>Income</i>				
40 % poorest	1.0	1.0	1.0	1.0
40 % richest	1.25	3.39	7.21	15.21
<i>Gender</i>				
Female	1.0	1.0	1.0	1.0
Male	1.10	1.16	1.44	1.40
<i>Geographical location</i>				
Rural	1.0	1.0	1.0	1.0
Urban	1.15	3.06	4.65	5.39

We again find that gender disparities increase with the level of education, and this pattern also holds for the two other social dimensions, strengthening the validity of the general sociological law according to which the scarcer a good, the more it tends to be appropriated by the most advantaged strata of the population. But the really new element illustrated by this table concerns the relative order of magnitude of social disparities regarding gender, geographical location and income. It is clear that, while gender disparities exist, those associated with geographical location are significantly greater, while those linked to income are even larger<sup>11</sup>. Children from a family in the poorest 40 per cent of the population, for example, have 7.2 times less chance of enrolling in upper secondary education than their counterparts from a family in the richest 40 per cent of the population.

Obviously, larger differences will be found when the three criteria are compounded<sup>12</sup>, the most disadvantaged category being girls from poor families living in rural setting. But the accumulation of unfavourable factors has a greater impact than the additive influence of the three variables, the disadvantage of girls is

11 We have opted to compare relatively wide bands of income; it should be emphasised that the choice of smaller and more specific groups would have led to stronger differentiations. The relative chances of enrolment in lower secondary, upper secondary and higher education for children in the top two quintiles are 3.4, 7.2 and 15.2 times greater than for children in the bottom two quintiles. Had we compared only the first and fifth quintiles, these figures would have been respectively 5.9, 16.6 and 31.8.

12 It is to be noted that while gender is largely orthogonal to the other two criteria (girls and boys are in similar proportions both in urban and rural settings as well as in rich and poor families), the other two criteria are not statistically independent. While the vast majority of rich are urban and most of poor are rural, some urban families live in poverty and some families living in rural settings are relatively wealthy.

noticeably stronger when the family is traditional and economically disadvantaged than when it is urban, rich and educated.

## COMMENTS AND PERSPECTIVES FOR ACTION

### *Some interesting structural relationships*

1. In the first section of the paper, we emphasised both the existence of substantial structural disparities in the distribution of public resources in education and a wide variety across the different countries of the region on this count. At this point, we noted that the degree of elitism of the systems of education did not have a social dimension and that an elitist system was not in principle incompatible with a high degree of social equity in the chances of being enrolled. It remains however that the structural dimension is the context in which social disparities are generated; and one can reasonably anticipate that more elitist systems will tend to foster greater social disparities, in particular because socially advantaged groups are probably more able to compete for scarce places in the segments of the school system for which demand is greatest.

To put this hypothesis to test, we first calculated for each country, for which a household survey has been analyzed, a synthetic index of social disparities in education. This index calculated the average of the ratios of the chances of enrolments of the advantaged (boys, urban, two highest quintiles of income) to the disadvantaged (girls, rural, two lowest quintiles), calculated also as the average over primary and secondary education. This index gives a reasonable idea of the magnitude of social disparities in education in the different countries of the region. The average value of the index is 2.62, but it varies widely from 1.05 (low level of social disparities in primary and secondary education) to 5.47 (a very high level of social disparities in the chances of obtaining schooling). The index is below 1.5 in countries such as Namibia, Kenya or Zimbabwe, but it is above 4 in Burkina Faso, Ethiopia, Mali and Niger.

When we contrast (using a figure or a statistical analysis) this index of social disparities with that of structural disparities (presented in the first part of the paper), it confirms that more structurally elitist systems of education tend also to be characterised by higher levels of social disparities; the  $R^2$  of the direct relationship between the two indexes is 0.71, a relatively high value indicating a fairly tight relationship between the two variables. It is tempting to try to determine which aspects of educational policy influence the level of the structural index so as to identify the conditions which, other things being equal, are more or less propitious to the emergence of social disparities in education.

2. While doing this, it should be borne in mind that the structural index is relatively strongly associated with the characteristics of primary education, in particular its coverage and per pupil spending; the equation that makes a link between these elements shows that coverage is by far the most crucial variable. The reason for this is the high correlation between coverage and per pupil spending that

derives from the fact that when unit costs are high coverage is low as a consequence of budgetary constraints. The  $R^2$  between the structural index and the indicator most used to account for the coverage of a system of education (the School Life Expectancy, SLE, calculated as the average number of years of schooling of a cohort) is estimated at 0.75.

The SLE statistics can then be analyzed as potentially dependent on three main factors characterising different aspects of a country's educational policy: a) the volume of public resources mobilised for the sector (as measured by the share of public spending on education in GDP, EDGDP<sup>13</sup>); the greater the public resources available for the sector, the higher the coverage is likely to be; b) the level at which teachers are remunerated (TEAPAY<sup>14</sup>); we hypothesise that when teachers are better paid it is easier to recruit good candidates, but that ultimately fewer teachers are recruited given budgetary constraints; c) the pupil-teacher ratio (PTR), the hypothesis being that, other things being equal, lower levels of PTR<sup>15</sup> help increase the coverage of the system.

For practical reasons, teacher pay and pupil teacher ratio in primary education are considered (suffix P after TEAPAY and PTR) since there is a strong correlation in these variables across levels, and since it is mostly for primary education that data are available. The results of the statistical estimation are as follows:

$$\text{SLE} = 9.1 + 0.42 \cdot \text{EDGDP} - 0.82 \cdot \text{TEAPAYP} - 0.21 \cdot \text{PTRP} \quad R^2 = 0.75$$

(t=2.3)                      (t=4.5)                      (t=0.7)

This equation, whose explanatory power is high ( $R^2=0.75$ ), shows that the level of public resources plays a role, but that the level of teacher remuneration exerts a particularly strong influence. The pupil-teacher ratio has no significant impact given its relationship with the other variables included in the model. The reason is on the one hand that countries that mobilise more resources for the sector tend to use them to reduce PTR and, on the other, that countries that pay their teachers well tend to increase class size to counterbalance the negative influence on coverage.

3. At the end, one can conclude that social disparities tend to be large in structurally elitist systems of education in which overall coverage is relatively limited and that

13 This varies from 1.5 to 7 per cent across African countries; the specific value is determined on the one hand by general fiscal capacity (largely exogenous, but varies from 8 to 35 per cent of GDP) and on the other from the priority (endogenous, but varies also more or less from less than 8 per cent to more than 35 per cent of total public spending) given to education by each country.

14 The level of teachers' pay is highly variable across sub-Saharan countries. For example in primary education, it varies from less than 1.5 times the per capita GDP in some countries to more than 8 times in others.

15 This statistic is also characterized by a high level of variability across countries. In primary education, the pupil-teacher ratio varies between 24 and 80; in secondary and higher education, the variations are only slightly less than in primary education.

the level of remuneration of teachers is an aspect of educational policy that has a strong impact on the level of social disparities in a system of education.<sup>16</sup>

*Some further considerations at a micro level*

Beyond these observations made at the level of macro educational policies, let us now examine some complementary elements at the micro level that influence the magnitude of social disparities in sub-Saharan African countries.

Generally speaking, effective schooling is the result of a successful match between a demand from the family and a supply of educational services, generally from the State<sup>17</sup>. Some children may be at a disadvantage vis-à-vis schooling either because there is an inadequate supply of services (or no service available at all), or because there is not enough demand for schooling from their parents. Let us briefly explore these issues from both a theoretical and empirical point of view.

Concerning the supply of educational services, a general observation is that education systems, as with most social services, tend to expand through a kind of “concentric” process beginning with what is easy, and moving progressively towards what is more difficult (leaving for the end what is really very difficult). This means that urban areas (and in particular the capital city) are served first, where the density of population and strong demand combine to facilitate the provision of services; urban areas are also the centre of political and sociological support for governments. Then, when these populations have been served, the expansion of the system concerns smaller locations and relatively easy-to-reach rural areas. It is only at the end that difficult-to-reach populations are included. To compound the problem, teachers are often reluctant to be deployed in the most remote areas. The process that has just been sketched is obviously stylised and describes only general trends, but there are many examples to illustrate the tendency. It is typically true that even in countries with a very low global coverage, enrolment rates in urban areas are very high<sup>18</sup>.

A convenient method to assess the availability of educational services consists of analyzing the distance between home and the nearest primary school. In urban areas, this distance is almost always small, facilitating access to school. By contrast, in rural areas this distance can range from 0 to 15 kilometres. The analyses conducted on household surveys show that the distance to school has a significant impact: the

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16 Teachers need to be aware that the goal of better pay implies, in a context of scarcity of resources, a pressure that leads to reduced coverage, and ultimately, to an increase in social disparities (in contrast to the values many teachers hold).

17 This is probably the most common case; but it should be noted that an inadequate supply (in terms of availability of services at a reasonable distance but also in terms of their quality) from the State can lead parents to establish and finance community services, to pay for services in private schools, or to pay additional teachers (“parents’ teachers”) in public schools.

18 For example, in Niger in 1998, the gross enrolment ratio of primary education was about 30 per cent; however, it was 75 per cent in urban settings (100 per cent in Niamey), only 20 per cent in rural areas as a whole, and much less in deprived rural zones.

chances of having access to school in all countries shrink strongly where distance is greater than 2.5 km, and become very small after 5 km. In addition, the proportion of children whose nearest school is further than 2.5 km away varies strongly from one country to another. A point that strengthens the argument made above is that we find a high proportion of the population living in poverty within those countries for which average distance to the nearest primary school is greater. The geographical distribution of school places contributes to the existence of social disparities in the chances of attending school.

It is finally of interest to introduce a time dimension to the analysis. We use the case of Mali. A basic observation is that over the last 15 years, the proportion of children for whom the nearest school is farther than 2.5 km, has declined from over 50 per cent to less than 25 per cent of population. This is a significant improvement in the supply side of services and this change has led to a substantial increase in the proportion of children effectively enrolled. But the analysis of a 2004 household survey also points to the limits of this type of educational policy; if the existence of a school less than 2.5 km away is a necessary condition for schooling, it is not a sufficient one. Even for the population for whom the nearest school is located less than 1 km from home, about 35 per cent of the children are not enrolled. This suggests that factors on the demand side probably play a significant role. This is also indicated by the fact that while 20 per cent of boys from wealthier families do not attend school, the figure is 60 per cent (in spite of the availability of a school near home) for girls whose family income is in the lowest quintile. Some proportion of the social disparities in education is rooted on the demand side.

These observations suggest, and this is probably valid to varying degrees for all sub-Saharan African countries, first, that standard supply side policies are obviously necessary, but also that they are limited, often very much before getting to universal coverage, by insufficient demand for schooling from the last populations to enrol in school. These last populations may account for up to one third of the total age group, and their characteristics do not make them easy to enrol.

In order to progress further, it may be useful to come back to the basic paradigm of the demand for schooling. Put simply, individuals demand education services inasmuch as the benefits they anticipate are larger than the costs they have to bear. This suggests two possible factors contributing to the socially unequal demand for schooling: a) the first factor is that families may not have difficulty with school in general, but the services offered are not seen as relevant; in other words, they do not value enough the particular type of schooling they are offered; b) the second factor is attached to the families themselves and to their specific economic and social circumstances, the degree of poverty and the characteristics of the household economy being important dimensions to consider.

The first factor links up with the supply side dimension because the characteristics of the education services are central to the 'refusal' to enrol. It should be pointed out that these characteristics are seen as relevant for those families whose demand for schooling is strong, but may not be as relevant for more traditional and deprived families, whose inclusion is necessary to move towards universal coverage of primary education. These characteristics may be grouped in three categories:



- a) the first is related to the cash contribution that parents pay to enrol their children in school (school fees, parents' associations, purchase of textbooks, uniforms etc.). Direct costs may sometimes be very substantial, in particular when parents need to pay the salaries of some teachers, as can happen in public schools in Cameroon, Chad, Togo or Mali. Even where the cash contribution appears small for those in wealthier circumstances, it may prove to be unbearable for families living in poverty in a context where cash is scarce. Natural experiments such as the abolition of school fees in primary education in Uganda or Cameroon are illustrative. In one year in Uganda, the law for free education brought in over a million children to school, while in Cameroon, the abolition of fees (only about three dollars per pupil per year) led to an increase of 60 per cent in the number of new entrants in Grade 1. There is no doubt that the price elasticity of the demand for schooling is larger than is often assumed, in particular when socially disadvantaged populations are concerned;
- b) the second component concerns the content of what is taught in school. As far as curricula are concerned, schools are always confronted by a dilemma: on one hand schools need to comply with demands from families, which means continuity with concrete life and reference to traditions and, on the other hand, schools also need to develop the skills and attitudes that allow social and economic progress. For the part of the population with a strong demand for education, more modern programs are viewed positively; but such programs do not match the demands of the more traditional and socially disadvantaged strata of the population. It is precisely this segment of society that has missed out on education in the past, and that it is now essential to include to move towards universal coverage. In some countries, the language of instruction or the place of religion in the curriculum will need to be considered if the poorest groups are to be fully included in education.
- c) the third component concerns the ways in which services are organised. This may concern the dimension of time and the manner in which time is used. Time itself can concern the official school calendar over the year, the week or the day, which may or may not match the wishes of parents in the context of the household economy<sup>19</sup>. Now, it is known that it is precisely those families that are socially and economically deprived that are especially sensitive to these aspects of the operation of schools. But time may also concern the time deficit existing between the official and actual school calendar, with deficits most affecting the remote areas where the

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<sup>19</sup> Schools are sometimes open at the very times when the contribution of children in the fields is crucial, while they are closed when the need for children in the fields is minimal; similarly, the school day may be between 7am and 1pm, while the tradition is for girls to go and fetch water in the morning, to be available only at 9.30am and remain so till 3pm; an easy-to-implement change in school hours would improve girls' chances of being enrolled (cf. BRAC schools in Bangladesh).

most deprived populations live<sup>20</sup>. In addition, schools in deprived areas tend themselves to be deprived in terms of teachers' credentials or textbook availability. It has also been shown that female teachers are more likely to retain children, and in particular girls, in school (probably as an outcome of a greater confidence from mothers), but female teachers work mostly in urban areas; it is in the contexts where the most disadvantaged girls are located that female teachers are least present.

## CONCLUSION

The exploration of social disparities in education in a region as large as sub-Saharan Africa is obviously an endless enterprise. The choice has been made here to analyse the issue from a global perspective without entering the wealth and specificities of the many studies on this theme over the last 20 years. We have tried to delineate what is general and structural, rather than what is specific or largely cultural.

In term of results, the importance of the systemic context as the shell in which social disparities are generated is striking. The difference in the magnitude of social disparities in education in Mali and Zimbabwe, for example, is explained first because the systems of schooling differ in their structure, financing and coverage. Similarly, the evolution of social disparities in the system of education of a given country over a certain period of time is accounted for primarily by the structural evolutions that have taken place over that period. For example a crucial factor to account for the reduction of social disparities in Cameroon between 2000 and 2003 is the abolition of school fees during that period. Now, this does not imply there would be no difference or specificity between Mali and Zimbabwe, nor that it would not be interesting to analyze changes in attitudes towards education in Cameroon; but it must be admitted that neglecting the structural dimension may lead to errors in diagnosing problems and in assessing the effectiveness of past or future policies.

A second important result is that, while gender disparities are a dimension that warrant attention, the quasi-exclusive focus of research work as well as national and international policy on this aspect of social disparities is perhaps excessive. While gender is important, in the African context, parental poverty matters much more in determining educational access. Today, when the international community seeks universal completion of primary education in the context of the millennium goals, the following must be remembered: a) the first challenge of inclusion is the population in poverty and b) the challenge is unlikely to be met using only traditional policies (particularly policies improving supply) and new policies (in

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20 Due to deficiencies in the assignment process and teacher payment, and to the reluctance of teachers to work in remote areas, it is common i) that the effective beginning of the school year is postponed, ii) that some teachers are simply missing when school starts and iii) that some teachers spend a week every month collecting their salary, leaving their class unattended during that time. These conditions necessarily undermine students' learning and parental support for the school.

particular those exerting an impact on demand) need to be considered. This also requires new research work focused on these goals.

#### REFERENCES

For the sources used in the analysis in this chapter, see n.8 above. On statistical sources, see also: (a) UNESCO Institute of Statistics, administrative data and (b) household surveys from the World Bank survey program. For UNESCO, see: [http://www.uis.unesco.org/ev.php?URL\\_ID=5187&URL\\_DO=DO\\_TOPIC&URL\\_SECTION=201](http://www.uis.unesco.org/ev.php?URL_ID=5187&URL_DO=DO_TOPIC&URL_SECTION=201). For the World Bank Africa Household Survey Data Bank, see: [http://www4.worldbank.org/afr/poverty/databank/about\\_details.cfm](http://www4.worldbank.org/afr/poverty/databank/about_details.cfm)).

Table 10.5: Gender disparities in education in sub-Saharan African Countries, 1990 - 2002

Countries	Year	Primary Education										Lower Secondary				Upper Secondary		Higher		
		GER (%)		Access Rate (%)		Completion (%)		Reten- tion	GER (%)		TBS (%)		Students / 1000.000 pop							
		M	F	M	F	M	F	F/M	M	F	M	F	M	F	M	F				
		F/M	F/M	F/M	F/M	F/M	F/M	F/M	F/M	F/M	F/M	F/M	F/M	F/M	F/M	F/M				
<i>Angola</i>	1990	96	88	91.7	133	119	89.5	42	35	83.3	0.931				51	10	19.7			
	2002	118	85	72.0											61	35	58.0			
<i>Benin</i>	1990	78	39	50.0	104	50	48.1	30	14	46.7	0.971	19	8	43.2	8	2	24.2	166	32	19.3
	2002	127	92	72.4	128	102	79.7	65	37	56.9	0.714	35	25	71.4	12	4	31.4	215	53	24.7
<i>Botswana</i>	1990	99	197	101.8	109	111	101.8	82	99	120.7	1.186	37	46	121.9	17	15	90.4	212	154	72.6
	2002	103	103	100.0	114	110	96.5	87	96	110.3	1.143	81	86	106.2	40	46	115.6	285	232	81.4
<i>Burkina Faso</i>	1990	40	25	62.5	39	25	64.1	24	14	58.3	0.910	12	7	54.4	3	1	32.0	65	19	29.2
	2002	53	39	73.6	61	45	73.8	34	24	70.6	0.957	19	13	68.4	6	2	40.0	100	34	34.0
<i>Burundi</i>	1990	78	65	83.3	72	62	86.1	50	43	86.0	0.999	8	5	64.1	3	1	43.5	49	17	34.1
	2002	86	69	80.2	93	80	86.0	36	26	72.2	0.840	14	12	85.7	6	4	65.5	122	53	43.4
<i>Cameroon</i>	1990	107	92	86.0	88	78	88.6	60	52	86.7	0.979	31	24	76.7	19	10	53.0			
	2002	116	99	85.3	107	93	86.9	65	55	84.6	0.974	33	30	90.9	19	15	81.7	322	204	63.4
<i>Cape Verde</i>	1990	117	110	94.0	123	117	95.1					29	29	101.8	14	13	94.8			
	2002	124	118	95.2	109	106	97.2	88	105	119.3	1.227	92	106	115.2	44	50	114.3	249	220	88.4
<i>C.A.R.</i>	1990	80	51	63.8	70	51	72.9	36	19	52.8	0.724	20	8	42.2	9	2	28.0	102	18	17.6
	2002	78	53	67.9				22	15	68.2								143	28	19.6



Cont: Table 10.5: Gender disparities in education in sub-Saharan African Countries, 1990 - 2002

Countries	Year	Primary Education						Lower Secondary		Upper Secondary		Higher								
		GER (%)		Access Rate (%)		Completion (%)		Reten- tion	GER (%)		TBS (%)		Students / 1000.000 pop							
		M	F	M	F	M	F	F/M	M	F	M	F	M	F	F/GM					
<i>Ghana</i>	1990	79	66	83.5	85	76	89.4	70	53	75.7	0.847	75	51	67.3	9	4	48.6	78	23	29.4
	2002	81	77	95.1	89	86	96.6	60	63	105.0	1.087	60	52	86.7	22	18	83.0	245	94	38.4
<i>Guinea</i>	1990	46	22	47.8	53	26	49.1	25	9	36.0	0.733	16	6	36.2	7	1	20.0	76	5	6.6
	2002	92	71	77.2	86	76	88.4	51	31	60.8	0.688	37	29	78.4	21	8	40.3	303	37	12.2
<i>Bissau</i>	1990	65	35	53.8				21	12	57.1		9	5	57.9	3	1	23.3	40	3	6.3
<i>Guinea</i>	2002							40	24	60.0		29	16	55.2	12	7	57.1	29	5	17.2
<i>Kenya</i>	1990	97	92	94.8	119	113	95.0	69	57	82.6	0.869	29	23	79.2	7	4	50.9	97	41	41.7
	2002	95	90	94.7	97	95	97.9	76	73	90.8	0.927	40	38	95.0	25	22	88.3	205	109	53.2
<i>Lesotho</i>	1990	101	113	111.9	110	112	101.8	48	82	170.8	1.678	24	38	154.1	11	13	121.2	54	77	142.6
	2002	125	127	101.6	134	129	92.5	57	67	135.1	1.461	35	46	131.4	18	23	122.6	142	197	138.7
<i>Madagascar</i>	1990	95	92	96.8	92	95	103.3	34	35	102.9	0.996	22	22	100.6	9	8	93.6	184	150	81.5
	2002	122	117	95.9	130	125	96.2	40	41	102.5	1.065	21	21	100.0	7	7	99.6	104	86	82.7
<i>Malawi</i>	1990	74	62	83.8	107	98	91.6	40	31	77.5	0.846	5	3	51.2				37	14	37.8
	2002	143	137	95.8				71	68	95.8		57	43	75.4	29	17	57.8	21	8	38.1
<i>Mali</i>	1990	32	19	59.4	32	19	59.4	14	9	64.3	1.082	12	7	58.8	2	1	35.7	59	10	16.9
	2002	66	50	75.8	63	53	84.1	47	30	63.8	0.759	28	16	57.1	13	7	53.8	371	200	53.9

Cont: Table 10.5: Gender disparities in education in sub-Saharan African Countries, 1990 - 2002

Countries	Year	Primary Education										Lower Secondary			Upper Secondary			Higher		
		GER (%)		Access Rate (%)		Completion (%)		Retention		GER (%)		TBS (%)		Students / 1000.000		pop				
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
<i>Mauritania</i>	1990	58	43	74.1	64	48	75.0	40	26	65.0	0.867	19	9	49.5	16	7	46.4	239	42	17.6
	2002	89	87	97.8	103	103	100.0	49	44	89.8	0.898	28	22	78.6	19	15	76.8	245	66	26.9
<i>Mauritius</i>	1990	109	109	100.0	99	99	100.0	103	102	99.0	0.990	63	66	105.3	45	44	97.5	223	155	69.5
	2002	104	105	101.0	92	94	102.2	105	104	99.0	0.969	82	80	97.6	60	66	110.1	612	774	128.5
<i>Mozambique</i>	1990	73	55	75.3	80	65	81.3	34	22	64.7	0.796	20	13	63.1	3	1	40.1	24	8	33.3
	2002	114	93	81.6	120	110	91.7	57	38	66.7	0.727	41	27	65.9	9	6	70.8	30	23	76.7
<i>Namibia</i>	1990	119	120	100.8	195	194	99.5	70	85	121.4	1.220									
	2002	105	106	101.0	98	97	98.0	87	93	106.9	1.091	72	82	113.9	32	32	98.5	376	315	83.8
<i>Niger</i>	1990	35	20	57.1	33	20	60.6	23	13	56.5	0.932	11	5	47.7	3	1	24.7	43	9	20.4
	2002	51	36	70.6	68	50	73.5	24	17	70.8	0.963	11	7	63.6	3	2	55.5	85	28	32.9
<i>Nigeria</i>	1990	103	81	78.6	126	100	79.4	82	62	75.6	0.952	33	25	76.2	20	16	78.6	289	92	31.9
	2002	132	107	81.1	132	107	81.1	92	73	97.3	0.978									
<i>Rwanda</i>	1990	72	71	98.6	97	95	97.9	44	44	100.0	1.021	3	2	60.2	2	1	46.3	39	9	23.2
	2002	122	122	100.0	166	167	100.6	38	36	94.7	0.941	11	11	100.0	3	2	65.0	157	80	51.0
<i>Sao Tomé</i>	1990											79	75	94.6	40	33	82.3			
	2002							55	66	120.0		69	58	84.2	24	21	90.4			

Cont: Table 10.5: Gender disparities in education in sub-Saharan African Countries, 1990 - 2002

Countries	Year	Primary Education						Lower Secondary		Upper Secondary		Higher								
		GER (%)		Access Rate (%)		Completion (%)		Reten- -tion	GER (%)		TBS (%)		Students / 1000.000 pop							
		M	F	M	F	M	F	F/M	M	F	M	F	M	F	F/GM					
<i>Senegal</i>	1990	66	49	74.2	61	49	80.3	51	33	64.7	0.806	24	13	55.5	12	6	49.4			
	2002	83	77	92.8	95	94	98.9	53	43	81.1	0.820	26	18	69.2	11	7	61.1			
<i>Seychelles</i>	1990											76	75	98.6	80	75	94.2			
	2002	115	114	99.1	102	102	100.0	120	116	96.7	0.967									
<i>Sierra Leone</i>	1990	60	41	68.3								35	21	59.3	16	8	47.4	88	28	31.6
	2002	69	57	82.6	55	48	87.3	42	36	85.7	0.982	35	23	65.7	22	17	78.4	138	56	40.6
<i>Somalia</i>	1990	14	7	50.0																
	2002																			
<i>South Africa</i>	1990	107	106	99.1	151	140	92.7	76	85	111.8	1.206	78	91	116.7	54	65	120.4	667	568	85.2
	2002	108	104	96.3	118	114	96.6	96	102	106.3	1.100	100	105	105.0	65	77	117.2	675	775	114.8
<i>Sudan</i>	1990	59	45	76.3	67	51	76.1	48	39	81.3	1.068	28	22	77.0	17	14	86.9	141	95	67.2
	2002	64	56	87.5	69	61	88.4	53	45	84.9	0.960	56	42	75.0				336	300	89.3
<i>Swaziland</i>	1990	99	97	98.0	108	107	99.1	66	72	109.1	1.101	48	49	101.2	27	24	88.0	192	171	89.1
	2002	102	94	92.2	97	92	94.8	73	77	105.5	1.113	50	51	102.0	30	28	94.8	229	275	120.1
<i>Togo</i>	1990	133	87	65.4	113	86	76.1	55	26	47.3	0.622	37	14	36.9	13	3	19.3	221	30	13.6
	2002	132	110	83.3	110	99	90.0	92	63	68.5	0.761	66	36	54.5	20	6	28.2	243	49	20.2



Cont: Table 10.5: Gender disparities in education in sub-Saharan African Countries, 1990 - 2002

Countries	Year	Primary Education										Lower Secondary				Upper Secondary		Higher			
		GER (%)		Access Rate (%)		Completion (%)		Retention		GER (%)		TBS (%)		Students / 1000,000 pop							
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F				
		F/M	F/M	F/M	F/M	F/M	F/M	F/M	F/M	F/M	F/M	F/M	F/M	F/M	F/M	F/M	F/M				
Uganda	1990	76	61	69.0	116	100	86.2	49	30	61.2	0.710	16	10	62.1	4	2.0	39.8	83	32	38.6	
	2002	142	139	97.9	187	192	102.7	69	59	85.5	0.833	21	18	84.7	6	4.0	61.2	187	98	52.4	
Tanzania	1990	68	67	98.5	78	77	98.7	61	63	103.3	1.047	7	5	76.4	1	0.4	29.1	23	4	17.4	
	2002	86	83	96.5	149	142	95.3	57	59	103.5	1.086	49	8	16.3	2	1.0	49.9	65	21	32.3	
Zambia	1990	98	89	90.8	96	95	99.0	110	84	76.4	0.772	35	24	68.1	15	8.0	53.1	132	51	38.3	
	2002	85	79	92.9	86	86	100.0	66	55	83.3	0.833	41	36	87.8	19	15.0	81.2	200	93	46.5	
Zimbabwe	1990	104	103	99.0	120	120	100.0	99	93	93.9	0.939	70	69	99.2	35	26.0	74.8	321	158	49.2	
	2002	95	93	97.9	114	111	97.4	88	78	94.0	0.965	63	58	92.1	32	27.0	84.7	298	173	58.1	
<b>Average</b>																					
<i>Direct</i>	1990	<b>80.2</b>	<b>69.4</b>	<b>79.7</b>	<b>92.9</b>	<b>81.1</b>	<b>83.8</b>	<b>52.7</b>	<b>44.2</b>	<b>78.2</b>	<b>0.924</b>	<b>31.6</b>	<b>25.8</b>	<b>72.7</b>	<b>16.0</b>	<b>11.6</b>	<b>55.5</b>	<b>144</b>	<b>70</b>	<b>42.3</b>	
<i>Truncated</i>	1990	<b>76.3</b>	<b>66.7</b>		<b>82.8</b>	<b>73.6</b>		<b>52.4</b>	<b>44.2</b>												
<i>Direct</i>	2002	<b>98.9</b>	<b>88.1</b>	<b>88.1</b>	<b>101.5</b>	<b>94.3</b>	<b>92.0</b>	<b>62.0</b>	<b>55.7</b>	<b>86.7</b>	<b>0.937</b>	<b>44.5</b>	<b>37.1</b>	<b>97.4</b>	<b>21.6</b>	<b>17.6</b>	<b>71.6</b>	<b>220</b>	<b>140</b>	<b>54.1</b>	
<i>Truncated</i>	2002	<b>89.2</b>	<b>82.1</b>		<b>89.9</b>	<b>85.6</b>		<b>61.4</b>	<b>55.0</b>												

Note: Average figures for the gender ratios at the bottom of the table are the means of that indicator in the different countries, not the ratio between the regional averages for males and females. The averages are "direct" when they use the gross figures reported for each country, even if these exceed, in certain countries, 100 per cent (access rate of 149 per cent in Tanzania or 166 per cent in Rwanda in 2002); the "truncated" average is calculated after all figures exceeding 100 per cent have been brought down to 100 per cent. However, the gender ratios are always calculated on the basis on non truncated figures.

# 11 Education Inequality and Indigenous Australians

## Perspectives and Possibilities

*Sue Helme*

### INTRODUCTION

There are around 410,000 Indigenous<sup>1</sup> people in Australia, comprising about 2.1 per cent of the total population of 20 million. As the most disadvantaged minority group in the country they encounter, on a daily basis, the historical legacy of a society built on invasion, dispossession, colonisation and racism.

The “educational system” that the first Australians had in place before the invasion by Europeans over 200 years ago had contributed to an accumulation of knowledge and wisdom that ensured the continuous survival of their culture for more than 40,000 years. European invasion produced a devastating loss of customs, languages and oral archives. Racist government policies from colonial times set the pattern for ongoing and persistent inequality in their lives and opportunities. Today, Indigenous people are the poorest, sickest, least educated group in Australian society.

This chapter provides a perspective on inequality in the educational opportunities and outcomes of Indigenous peoples, and attempts to trace the development of our understanding of the causes of this inequality, from the first attempts to “educate” the local population to the present. The chapter begins with a brief overview of the current state of Indigenous disadvantage across a range of socioeconomic indicators, which highlights the socioeconomic context in which the issue of educational inequality must be addressed.

This is followed by an historical overview of key developments in the education of Indigenous peoples from colonisation to the present day, which sheds light on the ideas and values which underpinned the government policies of the time and the impact of these on present day educational opportunities and outcomes. It examines the past thirty years of education policies and programs designed to improve the educational status of Indigenous Australians, and assesses the progress that has been made in attempts to redress educational inequality in different sectors of education and training. The final section canvasses strategies for making genuine progress towards equality of educational opportunity for Indigenous peoples.

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<sup>1</sup> “Indigenous people” refers to both Aboriginal and Torres Strait Islander peoples.

## THE DIMENSIONS OF INDIGENOUS DISADVANTAGE

The various dimensions of Indigenous disadvantage are routinely investigated and widely reported. The second *Overcoming Indigenous Disadvantage* report (Steering Committee for the Review of Government Service Provision, 2005) shows that Indigenous people are still significantly disadvantaged compared with the rest of the population on key social indicators, such as life expectancy (17 years lower than for non-Indigenous Australians), rates of disability, school retention, labour force participation, household and individual income, home ownership, victim rates for crime, suicide and self-harm, deaths from homicide, and imprisonment and juvenile detention rates. On all these indicators, little progress has been made in the period from 2000 to 2004.

Indigenous people are much less likely than non-Indigenous people to participate in the mainstream workforce, and much more likely to be unemployed if they do (Hunter and Schwab, 2003). Lack of employment prospects has serious consequences, and has created significant and entrenched welfare dependency among large numbers of Indigenous people.

There are multiple connections between socioeconomic status, health and educational engagement. Health has a major impact on educational participation and outcomes, and the poorer health of Indigenous people has a significant impact on educational engagement and outcomes. Indigenous children are sick more often than non-Indigenous children, and experience higher rates of hearing loss, poor nutrition and intellectual disability (Thompson, 2003). Hearing loss caused by middle ear infections is a particular problem in Indigenous communities, with Indigenous children about three times more likely than non-Indigenous children to experience ear/hearing problems (Trewin & Madden, 2005).

A recent study of over 5000 Indigenous children in Western Australia (Blair et al., 2005) found that one in five Indigenous children had experienced seven or more significant life stress events in the prior twelve months. Such events include major changes in their lives, caused by traumatic events such as hospitalisation or the death of someone close to them. This proportion was 1000 times greater than that for non-Indigenous children. Life stress was one of the strongest factors to emerge as contributing to poor health, as was the lack of adults to rear children because adults were dying young or chronically sick themselves.

Thus ill-health and bereavement are an ongoing feature of the lives of young Indigenous people. In research undertaken by the author in schools and Technical and Further Education (TAFE) Institutes, staff informants frequently commented on the interrupted attendance patterns of many of their Indigenous students, who miss substantial amounts of schooling to care for sick parents, grandparents and younger siblings, or to attend funerals.

In the comment below, a staff member salutes the commitment of her students who manage to get to classes despite considerable obstacles:

“We’ve got students in here that look after Mum, three brothers, they’re young girls, they’re not even 18 themselves and they’re the sole carers really, and keep

the family going. So those complexities can make coming to class an effort, you know that's just another thing on top of their plate they've got to put up with that day."

(Helme, Polese and Nicholas, 2005: 48)

## THE HISTORICAL CONTEXT OF EDUCATIONAL DISADVANTAGE

Any discussion of Indigenous educational disadvantage requires an understanding of its history. Issues now confronting policy makers, school systems, teachers and students have been shaped by two centuries of government and non-government policies and interventions. These have, in effect, restricted the educational opportunities of Indigenous people, and created an intergenerational cycle of low educational achievement. This section provides an historical overview of these developments.

### *Colonial Days to the 1970s*

Efforts at educational provision for Indigenous students stretch back to the early 1800s, when colonial governments, and later Christian missionaries, attempted to "civilise" the Indigenous population. These early efforts reflected prevailing racial theories that Indigenous populations were naturally inferior to the technically more advanced dominant group, and that "full bloods" would eventually die out due to their inability to withstand the impact of "civilisation". Such views justified government policies and practices that provided minimal schooling for the growing numbers of mixed descent and detribalised Indigenous peoples who were thought to be capable of nothing more than the lowliest positions in white society.

Indigenous resistance to the first attempts to deliver a western-style education provided further evidence to the white invaders that the "natives" were incapable of becoming civilised, and various forms of bribery were used (free blankets on the Queen's birthday, for example) to get the children to school. Despite the promises of colonial leaders, children who gained European skills were not successful in achieving worthwhile permanent work or acceptance into white society, confirming parents' fears that education was no guarantee against endemic racism (Groome, 1998).

By the end of the 1850s there were no government schools for Indigenous children anywhere in Australia, and responsibility for the "protection" of Indigenous people was passed on to churches and other groups. For the next 100 years, Indigenous missions and reserves offered "protection" to dispossessed Indigenous families. In reality many Indigenous people were forced into camps on the outskirts of towns, living in abysmal conditions in a state of dependent poverty. Many camps still exist today and are notorious for a range of social problems, including domestic violence, child abuse and substance abuse.

Schools in reserves and missions were poorly equipped and staffed. Decades of segregation, which denied Aboriginal children a place in government schools by

consigning them to a separate, but inferior, system, trapped them into membership of a permanent underclass.

The rising number of mixed descent children, coupled with racist beliefs about inferiority, led to the policy of forced removal of children from their families. Institutionalisation in missions and government homes for the purposes of cultural assimilation was, in effect, a form of cultural genocide. Tens of thousands of children were removed up until the 1970s. In most states, the government was given legal power of guardianship over all Aboriginal children and control over the right of Indigenous people to marry. These practices had severe personal impacts on Aboriginal children, the details of which are outlined in the landmark inquiry into the “stolen generations” (Human Rights and Equal Opportunity Commission, 1997). The adverse effects of this practice included the loss of personal, family and cultural identity, and the inability of many of these children to fulfil their later role as parents, thus compounding intergenerational disadvantage.

### *1970s to the Present*

The stage for the reforms of the 1970s was set some years earlier, with the 1967 referendum, which amended the Federal Constitution to allow the Commonwealth to enact laws for the benefit of Aboriginal and Torres Strait Islander people. It also gave Aboriginal people the right to vote and to be counted in the Census.

The election of the Whitlam Labor Government in 1972 heralded a new era in Indigenous affairs. With the establishment of the Federal Department of Aboriginal Affairs, the Federal Government was able to dismantle the protective and restrictive State government legislation and shift the policy emphasis from assimilation to self-determination.

In 1973, the then Minister for Aboriginal Affairs defined self-determination as “Aboriginal communities deciding the pace and nature of their future development as significant components within a diverse Australia” (Lippmann, 1976, p. 2.). These changes took place in the context of policy initiatives and legislation across a broad spectrum of areas, for example, the Racial Discrimination Act, the passage of land rights legislation, and the establishment of Aboriginal Medical Services. These policies of self-determination and self-management also drove significant changes in educational policy, which highlighted the need for effective educational programs for Indigenous people and for a greater role for them in educational decision-making.

The extent to which schools were failing most Indigenous students was confirmed in the 1971 Census, which showed that while less than 1 per cent of the Australian population had never attended school, this contrasted with almost one quarter of the Aboriginal population. Only 3.5 per cent of Aboriginal people had achieved senior secondary or post-secondary education, compared with 29.6 per cent of the total Australian population (Beresford, 2003).

The Whitlam Labor Government initiated a number of educational enquiries and policies, the most influential being the Karmel Report (Interim Committee for the Australian Schools Commission, 1973), a major investigation into the funding and

resourcing of schools. This report noted the educational disadvantages faced by Aboriginal children, and the Commission subsequently formed an Aboriginal Consultative Group “to advise on the present needs and future provisions for the education of the Aboriginal people in Australia” (Aboriginal Consultative Group, 1975). This was the first Federal committee to advise on Aboriginal Education. This wide-ranging enquiry, in which the Aboriginal voice was clearly present, firmly established education as the most important strategy for achieving self-determination for Aboriginal people:

“We do not see education as a method of producing an anglicised Aborigine, but rather as an instrument for creating an informed community with intellectual and technological skills, in harmony with our own cultural values and identity. We wish to be Aboriginal citizens in a changing Australia” (Aboriginal Consultative Group, 1975, p. 3).

In accord with the values of multiculturalism which emerged during this decade, the report called for an education system that acknowledged the values and cultures of both Aboriginal and non-Aboriginal cultures, so that children would learn to function successfully in both their own culture and the wider Australian society. The report stressed the need for Indigenous identity to be actively developed through education, and for Aboriginal cultural values to be promoted within educational institutions.

The consultative group made thirty-seven recommendations across a broad range of issues. Central among these was the call for:

- Aboriginal involvement in decision-making positions which affect the education of their people;
- Concerted efforts to increase the number of trained Aboriginal teachers, liaison officers and teaching assistants;
- Incorporation of Aboriginal perspectives into school curricula.

Thus began a decade of reforms under the impetus of Commonwealth policy. At the end of the seventies, a major report was written on Aboriginal education which documented the gains that had taken place, and an impressive list of achievements was compiled (Watts, 1982). However, Watts’ investigations revealed significant shortfalls in the implementation of change, raising questions about the commitment of governments and education departments to achieving genuine improvements.

By the mid 1980s the continuing poor state of Aboriginal education attracted another burst of government activity, and in 1985 the Commonwealth Parliament established an inquiry into the issue. The report (House of Representatives, 1985) noted some progress in the involvement of Aboriginal people in the development and delivery of educational programs, but reported poor outcomes at the secondary level. The report of the enquiry singled out lack of a coordinated policy direction and inadequate funding as particular shortcomings.

Of particular concern was the lack of any real progress in addressing underlying social and economic factors impinging on the educational attainment of Aboriginal students. Poor home circumstances were reported to affect children’s ability to concentrate and also affected their ability to do homework while many students were hampered by lack of books and equipment or health concerns, such as chronic ear

and eye infections. The report was an important reminder of the need for a holistic approach to the issues of Aboriginal education.

The Commonwealth revisited Aboriginal education in 1988, when the Aboriginal Education Policy Task Force chaired by respected Indigenous educator Paul Hughes examined a wide range of evidence on education for Aboriginal and Torres Strait Islander peoples (Hughes, 1988). Its recommendations included setting targets for participation in all sectors of education. The Task Force also recommended adopting a national policy for the education of Aboriginal and Torres Strait Islander peoples, recognising that the key to improving education lay in concerted, cooperative, long term strategies which involved all governments and Aboriginal and Torres Strait Islander people themselves.

This call for a coordinated national education policy was acted upon when, in 1989, the States and the Commonwealth agreed to a National Aboriginal and Torres Strait Islander Education Policy (Commonwealth of Australia, 1989). This policy set out 21 long-term goals under four important themes:

- Involvement of Aboriginal people in educational decision making;
- Equality of access to education services;
- Equity of educational participation;
- Equitable and appropriate educational outcomes.

The final theme included two important goals: to enable Aboriginal students at all levels of education to have an appreciation of their history, cultures and identity, and to provide all Australian students with an understanding of and respect for Aboriginal traditional and contemporary cultures.

Five years later, a major review was initiated to assess how successful this policy had been in improving Aboriginal and Torres Strait Islander peoples' participation in, and outcomes from, education (Commonwealth of Australia, 1995). Again, lack of progress was a major finding. The Review concluded that, despite improvements in participation and outcomes over the five year period, there were still serious concerns about inequity.

In reporting that Aboriginal and Torres Strait Islander peoples were consistently falling behind their non-Indigenous peers in terms of educational outcomes, the Review noted that if the educational experiences available to Indigenous peoples were not perceived as relevant, appropriate or culturally inclusive, this situation would continue.

The report also recognised the tension between equity – the desire for access to education giving equal capacity to compete for employment – and the preservation of separate cultural and linguistic identity, which carries the right to have education delivered in more culturally appropriate ways. These tensions were at the heart of the report, which concluded that “Reconciliation requires both that the demands of equity be met and that the special status, circumstances and needs of Australia’s Indigenous peoples be recognised and respected as a basis for reconciliation” (Commonwealth of Australia, 1995, p. 20). The report also acknowledged diversity within and between Indigenous communities and the different policy responses that may be required in the light of this diversity.

Since the inception of the National Aboriginal and Torres Strait Islander Education Policy, many policies and programs have been developed at both State and Federal levels that specifically target Indigenous educational inequality. The Ministerial Council on Education, Employment, Training and Youth Affairs has had an active role in developing policy in Indigenous education and training, beginning with the 1999 Adelaide Declaration (MCEETYA, 1999) and continuing into the current decade with a range of policy documents on Indigenous education and training and annual progress reports (MCEETYA, 2001a, 2001b, 2004). The Federal Government has also actively supported efforts to document progress in this area (McRae et al, 2000; Commonwealth of Australia, 2002) and has funded a broad range of programs. These initiatives primarily take the form of “top ups” to a range of education and training providers, with the over-arching goal of achieving equality in educational outcomes for Indigenous peoples.

Despite this plethora of government policies, programs and initiatives, the fact remains that Indigenous students continue to be significantly disadvantaged compared with their non-Indigenous counterparts. Schooling over the past 200 years has created intergenerational patterns of educational disadvantage, and continues to fail large numbers of Indigenous students. This failure continues to be a major contributing factor to socioeconomic disadvantage among Indigenous people and their communities.

#### INDIGENOUS DISADVANTAGE IN EDUCATION AND TRAINING: RECENT DATA

This section outlines the key dimensions of Indigenous disadvantage in Australia’s education and training system. The characteristics of the Indigenous population that heighten this educational challenge are the relatively small numbers of Indigenous people compared with non-Indigenous Australians (most Indigenous students are a small minority in their schools and classrooms), the relative youth of the Indigenous population (the median age of the Indigenous population is 21, compared to 36 years for the non-Indigenous population), and geographical patterns of dispersion (more than 26 per cent live in remote or very remote areas, compared with 3 per cent of all Australians).

##### *Participation and Retention*

School completion rates for Indigenous students are distressingly low compared with every other demographic group in Australia. The apparent retention rate from Year 7 to Year 12 for Indigenous students is about half that of non-Indigenous students, and has remained so over the past decade (Australian Bureau of Statistics, 2006a). While Indigenous retention rates have shown some improvement over time, these gains have occurred in the context of similar improvements for non-Indigenous students.

For example, apparent retention rates for Indigenous full-time school students, from Year 7/8 to Year 10 (the end of compulsory schooling) and to Year 12, have



risen between 1998 and 2005. The rate to Year 10 increased from 83.3 per cent in 1998 to 88.3 per cent in 2005, and the rate to Year 12 increased from 32.1 per cent to 39.5 per cent. For non-Indigenous students over this period, retention to Year 10 was effectively 100 per cent, while retention to Year 12 increased from 72.7 per cent to 76.6 per cent (ABS, 2006).

These figures also reveal that substantial numbers of Indigenous students leave school at the end of Year 10, and those who do proceed are less successful than their non-Indigenous counterparts: 54.9 per cent of Indigenous students who enter Year 11 go on to complete Year 12, compared to 82.3 per cent of non-Indigenous students (Steering Committee for the Review of Government Service Provision, 2005).

It is important to recognise that aggregated data on school completion tends to mask regional differences. Completion of Year 12 is strongly associated with place of residence, with early school leaving more likely in rural and remote areas (Marks and Fleming, 1999; Teese, 2002; Welch, Helme and Lamb, 2007). Proportionally more Indigenous Australians live in remote parts of the country than do other Australians and access to schools is often more difficult in remote regions simply because there are fewer schools. Relatively few Indigenous communities in remote areas have a secondary school in or near the community and this has a strong effect on attendance (Biddle et al., 2004).

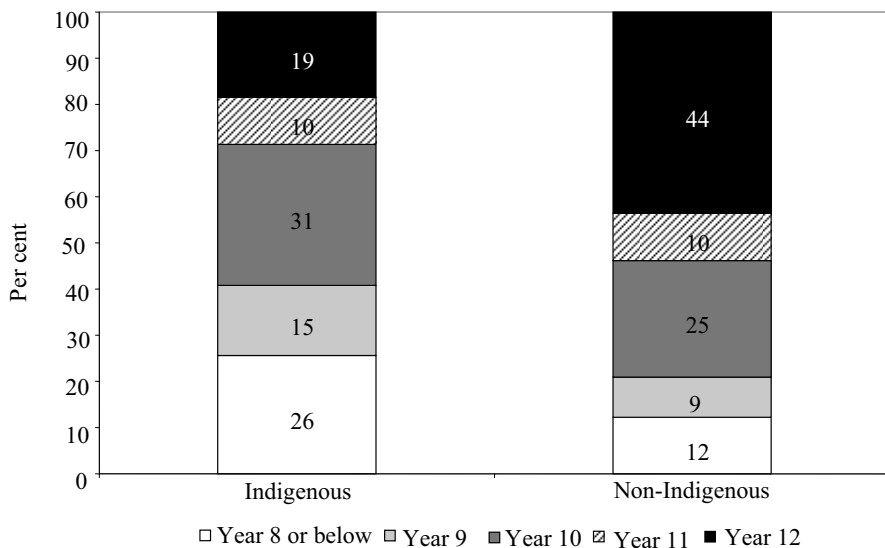


Figure 11.1: Highest level of schooling of people 18 years and over, broken out by Indigenous status

Source: Appendix to Indigenous Compendium, Steering Committee for the Review of Government Service Provision (2005).

These figures translate into a working-age Indigenous population that includes significantly fewer school completers. Figure 11.1 above shows highest level of schooling completed according to Indigenous status and demonstrates the disadvantaged position of Indigenous people in terms of access to further education and training and the labour market.

### *Academic Achievement*

The lower school achievement of Indigenous students compared with their non-Indigenous counterparts continues to be a source of concern to schools, systems and policy makers. Significant gaps occur early in schooling and continue to increase as students progress from lower to higher levels. The Ministerial Council on Education, Employment and Youth Affairs (MCEETYA) regularly collects benchmark data on literacy and numeracy performance, based on testing conducted in each State and Territory. According to MCEETYA (2004) these benchmarks describe nationally agreed minimum acceptable standards for aspects of literacy and numeracy at particular year levels.

The proportions of students at Years 3, 5 and 7 who reached the benchmark for reading, writing and numeracy in 2004 are shown in Table 11.1. The inclusion of confidence intervals reflects the uncertainty associated with the measurement of student achievement in different educational jurisdictions, and allows for sampling error (not all students participate). Despite these measurement issues, the data reveals significant gaps between Indigenous and non-Indigenous children for reading, writing and numeracy at all three year levels, with the largest gap (thirty per cent) in Year 7 numeracy. Importantly, the gap between Indigenous students and all students broadens substantially with increasing year level. In reading and numeracy the gap doubles from Year 3 to Year 7, while for writing, the gap is more stable.

*Table 11.1: Proportion of Years 3, 5 and 7 students who achieved reading, writing and numeracy benchmarks, 2004 (per cent)*

		Reading	Writing	Numeracy
Year 3	Indigenous students	82.9 ± 3.6	76.8 ± 4.3	79.2 ± 4.1
	All students	93.0 ± 1.5	92.9 ± 1.5	93.7 ± 1.2
Year 5	Indigenous students	69.4 ± 3.8	81.7 ± 3.5	69.4 ± 3.9
	All students	88.7 ± 1.6	94.2 ± 1.1	91.2 ± 1.2
Year 7	Indigenous students	71.0 ± 2.8	78.8 ± 3.8	51.9 ± 2.8
	All students	91.0 ± 0.7	93.6 ± 1.3	82.1 ± 0.8

Note: Percentages show 95 per cent confidence intervals, for example 80 per cent ± 2.7 per cent.

Source: MCEETYA (2004).

Table 11.2: Gap in benchmark achievement between Indigenous and All students in Reading, Writing and Numeracy, 2000 and 2004 (per cent)

		Reading	Writing	Numeracy
Year 3	2000	19.0	25.0	19.0
	2004	14.5	16.0	14.5
Year 5	2000	24.5	18.2	26.8
	2004	19.3	12.5	21.8
Year 7	2000	28.3	18.3	33.4
	2004	20.0	14.8	30.1

Note: Percentages show 95 per cent confidence intervals, for example 80 per cent  $\pm$  2.7 per cent

Source: MCEETYA (2001b, 2004).

A comparison of the most recent data with that collected in 2000 (MCEETYA, 2001) reveals that some relative gains have been made by Indigenous children in the five-year period from 2000 to 2004 (See Table 11.2). While these improvements are encouraging, there are still substantial gaps in the relative educational attainment of Indigenous and non-Indigenous children that have significant implications for their ability to manage the cognitive demands of secondary education.

While there are no MCEETYA data for students further along the educational journey, the results from the OECD Programme for International Student Assessment (PISA) confirm that Indigenous students continue to experience substantial educational disadvantage. This international comparison indicated substantial gaps between Indigenous and non-Indigenous students at 15 years of age. Indigenous students performed at a lower level than their non-Indigenous counterparts in all three assessment areas: reading, mathematical and scientific literacy (De Bortoli and Cresswell, 2004). The pattern of differences between males and females was similar in both the Indigenous and non-Indigenous samples: females outperformed males in reading literacy and there were no significant gender differences in mathematical and scientific literacy.

The study also investigated key socioeconomic indicators that are known to be associated with academic performance. Overall, the educational attainment of parents of Indigenous students was lower than for parents of non-Indigenous students. Indigenous students had fewer educational resources at home than non-Indigenous students (such as books, dictionary, desk for study), and the presence of these resources was found to be correlated positively with student performance. Indigenous students also spent less time on homework, but reported a higher level of family support in helping them with their schoolwork.

Socioeconomic status (as measured by parents' occupation levels) was correlated with the performance of all students in the sample. While Indigenous students showed a smaller range in SES compared to the whole Australian sample, the social gradient for Indigenous students was somewhat flatter than for non-Indigenous

students, which may indicate greater equity of outcomes in relation to their social backgrounds.

The study also revealed significant differences in the post-school plans of Indigenous and non-Indigenous students. While larger proportions of non-Indigenous students had plans to undertake a university education, Indigenous students were much more likely to intend to undertake an apprenticeship or technical or skilled trades qualification. Indigenous students were also about twice as likely as non-Indigenous students to plan no further study after leaving school.

### *Absenteeism*

Absenteeism is another measure by which Indigenous educational disadvantage can be assessed. Absenteeism among Indigenous students is markedly higher than among non-Indigenous students (Bourke, Rigby & Burden, 2000; Rothman, 2002) and higher rates of absenteeism have been associated with poorer educational outcomes among Indigenous students in primary schools (Frigo et al., 2003). The Bourke et al. study noted that the gap in average attendance widened in the early secondary years to about 15 per cent, then narrowed slightly in the final two years of schooling. Both the Bourke et al. and the Frigo et al. studies found considerable variation in the patterns of attendance within the Indigenous student population, with rates of absenteeism reported to be significantly higher in remote and very remote communities. Moreover, considerable variations in attendance were noted between schools in similar geographic and socioeconomic situations, which suggested that practices at the school level could significantly improve attendance rates. This has been demonstrated at Cherbourg State School in Queensland, where significant improvements in attendance and achievement were achieved in the context of a program of school renewal that included Indigenous leadership, community involvement, high expectations of students and an Aboriginal Studies program (Sarra, 2006).

### *Engagement with School*

Recent research indicates that Indigenous students are, on the whole, less positive about school than their non-Indigenous counterparts. Helme et al. (2003) examined data from a national survey of 20,671 students (of whom 451 identified as Indigenous) which included a question that asked students to select, from six options, the image that best described their school (Polesel & Helme, 2003). The images of school that were most often selected were the “stepping stone” (selected by 41 per cent of all students) and the “prison” (selected by 24 per cent of all students). These images reflect strongly contrasting views of school, the prison being a strong image of disaffection and disempowerment, while the stepping stone reflects a view of school as a stage in one’s life journey. Indigenous students more frequently selected the prison image than non-Indigenous students, and for Indigenous boys, this was the most frequently selected image (selected by 36 per cent). This contrasts with the proportion of non-Indigenous boys who selected this

image (27 per cent). While girls were less likely than boys to select this image Indigenous girls were more likely than non-Indigenous girls to view school as a prison (27 per cent compared with 16 per cent).

Much research has been undertaken to identify the causes of poor engagement with school. These include poor teacher-student relationships (which are often characterised by racism) and a low sense of belonging at school, underpinned by poor relationships between the school, parents and community (see Groome and Hamilton, 1995; Munns, 1998; Rigney, Rigney and Hughes, 1998; Herbert, Anderson, Price & Stehbens, 1999; Schwab, 1999; Godfrey, Partington, Harslett & Richer, 2000; Lester, 2000).

Teacher expertise in cultural awareness, cross-cultural communication and teaching English as a second language also impacts on the quality of teaching and learning experienced by Indigenous students (Bourke, Rigby & Burden, 2000, Herbert et al, 1999; DETYA, 2000). Some Indigenous students find engagement with school difficult because of non-school factors, such as poverty, poor health, imprisonment, high family mobility and indigenous inter-group tensions (Bourke, Rigby & Burden, 2000; Gray, Hunter & Schwab, 2000; Herbert et al., 1999). Students from remote communities face additional barriers to school engagement due to limited access to facilities and difficulties associated with living away from home.

Racism has been shown in numerous studies to have a major impact on educational engagement (Groome & Hamilton, 1995; Rigney, Rigney & Hughes, 1998). These studies identified both personal and structural racism. Personal racism includes racist taunts and physical violence, whilst institutional racism is manifest in the failure to acknowledge the culture of Aboriginal people within the everyday practices of educational institutions, and also in low expectations held of Indigenous students. Institutional racism is also reflected in how schools allocate resources, as well as in the construction of knowledge which informs curriculum content. Timetabling, teaching methods and assessment practices may also confer benefits to non-Indigenous students to the detriment of their Indigenous counterparts.

### *Transition to Higher Education*

Low rates of school completion and lower academic attainment mean that Indigenous people are significantly under-represented in tertiary education. This is most striking among the 18-24 age group (see Figure 11.2).

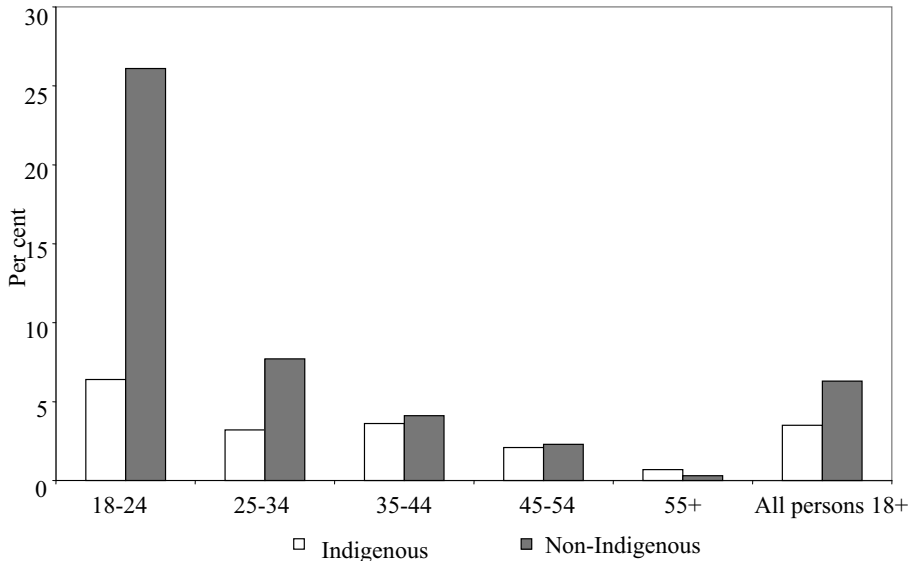


Figure 11.2: Participation in tertiary education by age group, broken out by Indigenous status

Source: Steering Committee for the Review of Government Service Provision (2005)

Indigenous students also experience higher withdrawal rates from higher education as measured by the apparent retention rate (ARR) which is the proportion of students who are retained in a course from the commencement of one academic year to the next (excluding completions). The non-Indigenous ARR has remained close to 0.80 from 1997 to 2003 while the Indigenous ARR has remained close to 0.60. This gap has not changed during this period (Commonwealth of Australia, 2005). Measures of student success tell a similar story, as indicated by the Student Progress Rate (SPR), the proportion of units passed in a year compared with total units in which students are enrolled. The SPR for non-Indigenous students remained at about 0.86 between 1997 and 2003, while the SPR for Indigenous students showed a slight increase from 0.63 to 0.67. This was well below the rate for non-Indigenous students.

Inequality in higher education can also be seen in the relative proportions of Indigenous and non-Indigenous students studying across the broad fields of education. Indigenous students are proportionally more likely to be studying Education, where they comprise 1.9 per cent of all domestic students, and Society and Culture (at 1.6 per cent). They are far less likely to be studying in technical fields such as Engineering, Architecture and Information Technology (between 0.2 and 0.3 per cent).

The number of award completions at Australian universities by Indigenous students in the five-year period from 1997 to 2002 shows a modest improvement of 5.8 per cent (compared with 12.9 per cent for all students), indicating a relative loss of share for Indigenous Australians (from 0.79 per cent of completions to 0.74 per cent). However, once Indigenous graduates enter the labour market, their chances of finding full-time employment are comparable to those of non-Indigenous graduates (in the years 2002 and 2003 they were somewhat higher), highlighting the high demand for Indigenous graduates (Commonwealth of Australia, 2005).

### *Transition to Vocational education and Training*

Recent research in the Vocational Education and Training (VET) sector provides a much more encouraging picture of Indigenous peoples' participation and outcomes. This sector provides industry training and skills development in a wide range of industries, from the traditional trade and manufacturing sectors through to service-oriented industries such as finance, business, health and welfare. The qualifications it delivers range from very basic through to the approximate equivalent of a first or second year university course.

The most significant finding is the explosion in Indigenous enrolments since the mid 1980s, when there were only about 3,300 Indigenous students in VET (Robinson and Hughes, 1999). In 2003, this figure had grown to over 58,000 students (NCVER, 2005). Another feature of VET participation that distinguishes it from higher education is the strong participation across the age spectrum (see Figure 11.3).

Despite these encouraging participation data, equality is yet to be gained in relation to level of courses completed. According to Saunders et al. (2003), Indigenous students tend to study for more lower-level qualifications than do non-Indigenous students and more frequently complete non-accredited or lower-level certificates than non-Indigenous students (72.9 per cent compared to 60.4 per cent). Conversely, non-Indigenous students are almost twice as likely to gain technician-level qualifications (18.9 per cent compared to 9.9 per cent). Non-completion is also a bigger issue for Indigenous students: the module pass rate for Indigenous students is less than that for non-Indigenous students (77 per cent compared to 86 per cent). Indigenous students are also more likely to withdraw from modules (13.8 per cent compared to 8.3 per cent).

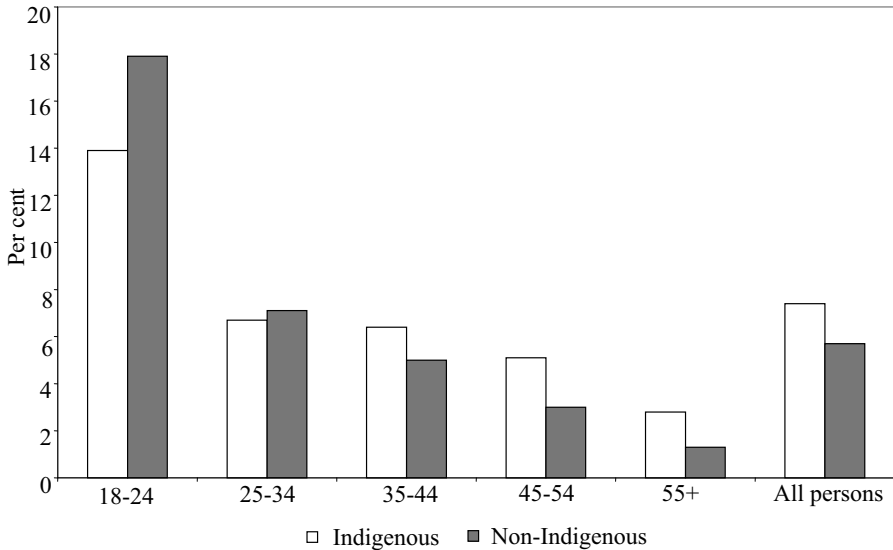


Figure 11.3: Participation in Vocational Education and Training by age group, broken out by Indigenous status

Source: Steering Committee for the Review of Government Service Provision (2005)

The impact of a VET qualification on employment of Indigenous people is difficult to gauge because of high levels of participation in Community Development Employment Programs (CDEP), which is counted as employment in the official data collection. The CDEP is a scheme whereby Indigenous people work for the equivalent of government unemployment benefits in community-based programs. It has been estimated that about one in three Indigenous people officially counted as employed are working in CDEP (Cully, 2005). Saunders et al. (2003) reported that for Indigenous graduates, employment increased from 53.4 per cent to 62.7 per cent, and for non-Indigenous graduates, the employment rate increased from 66.8 per cent to 73.6 per cent. The lower rates for Indigenous graduates may be the product of Indigenous students completing less vocationally-oriented, lower-level programs, with weaker employment outcomes. Taking these factors into account, it can be concluded that although VET improves employment outcomes for all graduates, there has been no progress in closing the gap between Indigenous and non-Indigenous graduates.

Recent research in Victoria undertaken by the Centre for Post Compulsory Education and Lifelong Learning (Helme, Polesel and Nicholas, 2005) provides an insight into the factors which facilitate participation in VET, yet limit its ability to



provide positive outcomes for Indigenous students.<sup>2</sup> This study found that VET was highly accessible to Koorie students, including those who had not completed secondary education or had low levels of literacy and numeracy. Indigenous support units in Technical and Further Education (TAFE) Institutes were found to be a significant source of academic and personal support, and very successful in delivering training in culturally appropriate ways. Importantly, they offer Indigenous students a “culturally safe” environment (Bin-Sallik, 2003) which respects their cultural identity.

Significant academic and cultural barriers were found to limit successful transition to the mainstream VET programs available in TAFE Institutes. These are the programs that provide the strongest employment pathways. Lack of flexibility in mainstream courses and low levels of teacher support were identified as significant barriers. Perceptions of racism in mainstream TAFE were common, and a small number of reports of overt racist remarks indicated a strong need for increased awareness and cultural change. Mainstream programs that were customised to suit the needs of Koorie organisations and communities were found to be highly successful.

An important function of VET identified by this study was its role as a stepping stone to higher education. Success in VET served to broaden the horizons of students who had not previously contemplated university study.

The most important role of VET is to create pathways to employment and the study confirmed that Indigenous students perceived VET courses as a means of finding a job, changing career direction or supporting career development. However, some respondents reported being unable to find a job related to their VET qualifications and expressed frustration with the absence of a direct pathway from VET into employment. They asked for more practical assistance in finding employment.

Racism in the broader community was perceived as the biggest barrier to employment for Koorie people, and interviews and consultations identified the need for a shift in attitudes towards Aboriginal people, including a greater recognition by employers of their skills and experience.

## THE WAY FORWARD

Despite gains in Indigenous participation and success in all levels of education and training, the gaps between Indigenous and non-Indigenous Australians stubbornly persist, highlighting the depth and intractability of educational inequality.

Educational disadvantage is a product of the history of Indigenous relations in this country since its invasion by Europeans over 200 years ago. The brief historical overview of Indigenous education in this chapter provides some insight into the role educational policy and practices have played in the creation of a seemingly permanent underclass of Indigenous Australians.

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2 In Victoria, Indigenous people are referred to as Koories, in recognition of familial and cultural commonalities.

While improving educational attainment contributes to breaking the cycle of disadvantage, gains in education will be limited while poor social conditions persist. It is not possible to “fix” educational disadvantage without addressing other aspects of socioeconomic disadvantage, and this is best achieved through the strengthening of Indigenous communities, both socially and economically. As long as Indigenous Australians are not positively integrated within the Australian economy, there is no economic base for individual and community development. Political integration through participation in institutional politics and government at all levels is essential if Indigenous voices are to be heard and if Indigenous priorities are to be addressed.

The second challenge lies in raising basic levels of achievement. Again, this will be very slow and can only occur with corresponding improvements in health, nutrition, housing, employment and community integration. Increased participation in pre-school is necessary if Indigenous children are to begin primary school on the same footing as their non-Indigenous classmates, and strategies to increase achievement in primary school are needed if Indigenous children are to progress to secondary school with a good chance of success.

Clearly, a non-racist environment that supports and encourages the development of a strong and confident Indigenous identity is an integral part of this process. As respected Indigenous educator Paul Hughes stated recently on ABC radio:

A school needs to pay a bit more respect to the culture of the students and the communities they are serving in the sense of recognising that people are there; paying attention to little things like the area you live in has got a lot of Aboriginal names attached to it. If you don't use those sorts of things and pay some cultural respect we become very invisible as a group of people and you feel you're not really valued terribly much, if who you are and where you're from and what you actually know yourself is not respected in some way. (Hughes, 2006)

Indigenous students deserve an educational environment where they belong, and where teachers expect them to succeed. Teachers' pedagogical practice must therefore affirm each student's cultural identity and treat their culture as an asset of real value. The curriculum has to respect and engage Indigenous students and ensure that all students, Indigenous and non-Indigenous, learn about the historical and contemporary aspects of Indigenous culture. Thus pre-service teacher training should equip teachers to include Indigenous perspectives in school curricula. Ideally all students, Indigenous and non-Indigenous, need an engaging and relevant curriculum. While the barriers to engagement experienced by the weakest learners from the white population are similar, these are experienced with much greater intensity by Indigenous students.

The VET system has been shown to have an important role in meeting the education and training needs of Indigenous Australians, from the development of basic skills through to professional training, operating as a “second chance” provider for many Indigenous learners. Indigenous support units have a key role in ensuring that VET programs and qualifications are developed and delivered in culturally appropriate ways to address the needs of individuals and communities. While low school completion rates continue to create barriers to university entrance, the VET

system can also provide Indigenous students with a pathway to university study, at least in the medium term.

Additionally, much greater accountability is needed at the school and system levels for monitoring and improving Indigenous outcomes. National data tend to mask the differences between different Indigenous communities in different parts of Australia: the challenges faced by a remote desert community are very different from those faced by urban Aborigines in the suburbs of Melbourne or Sydney. Hence the need for effective intervention programs that respond to local contexts and needs.

Innovations that improve the educational attainment of Indigenous students will also tend to help other disadvantaged individuals, including lower working class students who also face issues of disengagement and exclusion. So, in some important respects, improvement comes down to ensuring equity on a broad basis, making it central, rather than seeing the problem of Indigenous disadvantage as isolated and marginal and requiring special programs. These might be needed, but they are not a substitute for “whole-school” policies which address the needs of disadvantaged students, many of whom experience multiple forms of disadvantage. Secure funding for innovative programs in disadvantaged schools and communities is needed so that innovations have the chance to work and to be generalised to other settings.

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# Index of Names

- Aboriginal Consultative Group 261  
Achilles, C. M. 29  
Acland, T. 201  
Aholo-Sidaway, J. 146  
Alexander, K. L. 29, 31  
Allen, A. 201  
Anyon, J. 15, 16  
Applebee, A. N. 30  
Archer, D. 215  
Archer, L., 145  
Armor, D. J. 100  
Arms, E. 146  
Arneson, R. J. 160  
Arnot, M. 137, 139, 140, 142, 145  
Ashley, J. 192  
Askew, S. 141  
Asthana, S. 58  
Australian Bureau of Statistics 264  
Averch, H. A. 27  
Ayalon, H. 138  
Azmi, W. 201
- Bachrach, P. 207, 213  
Baker, D. P. 136, 139  
Baker, D. P. 32, 33, 35, 36  
Ball, S. 3, 17, 18, 57, 194  
Bandura, A. 139  
Banks, K. 105  
Bankston, C. L. 101  
Baratz, M. 207, 213  
Barr, R. 30  
Bartlett, L. 56, 60, 62  
Becker, G. 103  
Bell, J. F. 53  
Benadusi, L. 159  
Bennett, R. E. 60  
Berends, M. 69, 73, 75, 76, 77, 78, 79,  
80, 99, 101, 104  
Beresford, Q. 260  
Bernstein, B. 2, 122, 124
- BID 214  
Biddle, N. 264  
Bidwell, C. E. 30, 91  
Bin-Sallick, M. 272  
Blackburn, R. 191, 203  
Blair, E. M. 258  
Blanden, J. 61, 192  
Blatchford, P. 55  
Bleach, K. 144  
Blossfeld, H-P. 1, 49, 61, 163, 173  
Boliver, V. 203  
Boom, D. C. 121  
Borman, G. D. 29, 40  
Bosker, R. J. 55, 81, 124, 126,  
127, 128  
Boudon, R. 50, 61, 123  
Bourdieu, P. 2, 5, 6, 11, 15, 50,  
175, 192, 197, 198, 199,  
200, 201  
Bourke, C. J. 267, 268  
Bowe, R. 17  
Bowles, S. 28, 123, 139  
Boyd, D. 56  
Bradley, K. 138  
Breen, R. 50  
Brewer, D. J. 40, 56  
Brighthouse, H. 56, 58, 62  
Broh, B. 29  
Bronfenbrenner, U. 121  
Brookover, W. 124  
Brooks-Gunn, J. 50, 99  
Bros, L. 120  
Bryk, A. S. 37, 41, 58, 81, 103, 124,  
145  
Buchmann, C. 31, 32  
Budd, J. 139  
Burden, J. 267  
Burgess, S. 141  
Burt, K. B. 139  
Bush, President George W. 40

- Bussey, K. 139  
 Bynner, J. 52  
  
 Cain, G.G. 80, 81  
 Caldas, S.J. 101  
 Calero, J. 5  
 Campbell, J. R. 70, 83  
 Cancio, A. S. 80  
 Carnoy, M. 37, 38, 213  
 Carpenter, P. 144  
 Carroll, S. 57  
 Casassus, J. 31, 33  
 Ceci, S. J. 121  
 Champagne, P. 197, 198  
 Chevalier, A. 56  
 Chubb, J. E. 37  
 Clarke, P. 31, 32  
 Clifford, P. 55  
 Clotfelter, C. T. 25  
 Cobb, J. 200  
 Cockburn, C. 138, 146  
 Coe, R. 55  
 Coleman, J. S. 23, 25, 26, 27, 28, 30,  
     36, 37, 38, 39, 41, 50, 51, 58, 124,  
     125, 128, 179  
 Coley, R. J. 128  
 Collinge, J. 125  
 Commonwealth of Australia 262, 263,  
     269, 270  
 Connell, R. W. 142, 144  
 Connolly, P. 145  
 Connor, H. 54  
 Cook, M. 72, 75, 76, 79, 80, 81, 104  
 Cooper, P. W. 138  
 Corcoran, M. E. 80  
 Correnti, R. 29  
 Cortis, N. 145  
 Creemers, B. P. M. 55  
 Creswell, J. 266  
 Crombie, G. 146  
 Crook, C. J. 50  
 Croxford, L. 17  
 Cully, M. 271  
  
 Dale, R. 143  
 Daly, P. 141  
  
 Darmody, M. 144  
 Datnow, A. 146  
 David, M. 194  
 Davies, S. 126  
 de Andraca, A. M. 219  
 De Bortoli, L. 266  
 de Graaf, N. D. 50, 123  
 de Groot, A. D. 119, 120  
 de Leeuw, J. 81  
 de Saint Martin, M. 2  
 de Vries, G. 128  
 Deem, R. 143  
 Dekkers, H. 124, 126, 127,  
     128, 138  
 Delamont, S. 144  
 Delannoy, F. 210  
 Demack, D. 53  
 Department of Education and Skills  
     137  
 DETYA 268  
 DfES 55  
 Ditchburn, G. 138  
 Doherty, J. 60  
 Dollar, D. 217  
 Douglas, J. W. B. 60  
 Downey, D. B. 29, 30  
 Dreeben, R. 30  
 Drew, D. 53  
 Driessen, G. 127, 128  
 Drinkwater, S. 54  
 Dronkers, J. 120  
 Drudy, S. 142  
 Dubet, F. 158  
 Dumais, S. 142  
 Duncan, G. J. 50, 80  
 Duncan, O. D. 80, 81  
 Dunlap, C. E. 146  
 Duru-Bellat, M. 2, 7, 13, 17, 18, 144,  
     145, 165, 177, 179, 182  
 Dusek, J. D. 60  
 Dworkin, R. 161  
  
 Eaton, S. E. 25  
 Eccles, J. S. 127  
 ECLAC 208, 209, 212, 215, 219  
 Edwards, T. 59



- Ehrenberg, R. G. 56, 144  
 Elwood, J. 140  
 England, P. 135  
 Entwisle, D. R. 29  
 Epstein, D. 9, 51, 137, 142  
 Erikson, R. 185  
 Esping-Anderson, G. 165, 187  
 Estudiantes Secundarios de la R. M.  
     218  
 ETAN 146  
 Eurostat 182  
 Evans, W. N. 72, 76, 79, 80, 81, 104  
  
 Fagan, J. F. 139  
 Federal Ministry of Education and  
     Research 137  
 Feingold, A. 136, 139  
 Feinstein, L. 50, 57, 62  
 Ferguson, R. F. 72, 104  
 Figueroa, A. 207, 209  
 Finn, J. D. 29, 128  
 Fiske, E. B. 38  
 Fitz, J. 57  
 Fitzgibbon, C. T. 55, 141  
 Flanagan, A. 26, 72, 100  
 Flinspach, S. L. 105  
 Flynn, J. R. 121  
 Fogelman, K. R. 50  
 Francis, B. 137, 139, 141, 142, 145  
 Friedman, L. 136  
 Friedman, M. 37  
 Frigo, T. 267  
 Fuller, B. 31, 32  
  
 Galindo-Rueda, F. 50, 61, 192  
 Gamoran, A. 1, 25, 29, 30, 79, 80, 91,  
     104  
 Garcia Huídobro, J. E. 213  
 Gatti, R. 217  
 Gaustad, J. 128  
 GCSE 137  
 Geake, J. G. 138  
 GERESE 155  
 Gewirtz, S. 17, 57  
 Gibson, A. 54, 58  
  
 Giddens, A. 195  
 Gill, A. M. 80, 81  
 Gill, B. P. 105  
 Gill, J. 144  
 Gillborn, D. 53, 54, 60, 141, 145  
 Gillibrand, E. 146  
 Gilson, J. E. 146  
 Gintis, H. 123, 139  
 GIST 146  
 Glatter, R. 57  
 Godfrey, J. 268  
 Goldhaber, D. D. 40, 80, 81  
 Goldrick-Rab, S. 13  
 Goldring, E. B. 105  
 Goldstein, H. 50, 55, 58, 59, 60  
 Goldthorpe, J. H. 50, 119  
 Gorard, S. 52, 57, 58, 59, 137, 140  
 Grace, C. 58  
 Gray, J. 53, 141, 146  
 Gray, M. C. 268  
 Green, P. J. 78  
 Greenwald, R. 28, 29  
 Grindle, M. 214  
 Grissmer, D. W. 26, 72, 73, 74, 75, 76,  
     79, 85, 99, 100, 104  
 Groome, H. 259, 268  
 Guardian 193  
  
 Hakim, C. 52  
 Halsey, A. H. 49, 160, 177  
 Hambleton, R. K. 78  
 Hamilton, A. 268  
 Hanna, G. 126  
 Hannan, C. 138  
 Hannan, D. F. 144  
 Hanushek, E. A. 28, 29, 30, 32  
 Haque, Z. 53  
 Harker, R. 144  
 Hart, K. 206  
 Hauser, R. M. 103  
 Heath, A. 54, 55, 57  
 Hedges, L. V. 72, 74, 79, 99, 100  
 Hellevik, O. 50  
 Helme, S. 259, 267, 271  
 Helwig, A. A. 139

- Henderson, D. 2  
 Herbert, J. 268  
 Herr, K. 146  
 Herrnstein, R. J. 120, 121, 159  
 Heyneman, S. P. 31, 32, 33, 34,  
 35, 36  
 Heyns, B. 29, 30  
 Hier, B. 60  
 Hilgert, M. 208, 209  
 Hilton, T. L. 79  
 Hoff, D. 40  
 Hoffer, T. 36, 41  
 Hofman, W. 128  
 Hofstee, W. K. B. 119  
 Holland, P. B. 41  
 Hombo, C. M. 70  
 Hopkins, D. 125  
 House of Commons 63  
 House of Representatives 261  
 Howe, C. 141  
 Howell, W. G. 37, 40, 41  
 HREOC 260  
 Hsieh, C-T. 219  
 Hubbard, L. 146  
 Hughes, P. 262, 270, 273  
 Hunter, B. 258  
 Hutmacher, W. 155  
 Hyde, J. S. 126, 136, 139  
  
 ILO 208  
 Ingels, S. J. 77  
 Ireson, J. 50  
  
 Jacklin, C. N. 136  
 Jackson, C. 142, 146  
 Jannelli, C. 182  
 Jarman, J. 191, 203  
 Jencks, C. 26, 28, 39, 69, 99,  
 104, 120  
 Jensen, A. R. 120  
 Jesson, D. 59  
 Jones, C. 77  
 Jones, D. P. 136, 137  
 Jones, S. 139  
 Jonnsson, J. O. 50, 185  
  
 Jonsson, J. O. 119  
 Jordan, W. J. 128  
 Joseph, G. 60  
  
 Kahlenberg, R. D. 105  
 Kain, J. F. 28, 29, 30  
 Kane, T. J. 103, 105  
 Kaplan, G. 139  
 Karmel, P. 260  
 Karpova, S. N. 2  
 Kasarda, J. D. 30, 91  
 Kaufman, R. 212, 214, 215  
 Keeves, J. P. 126  
 Kelly, A. 138, 139, 141, 146  
 Kelly, S. D. 26  
 Kennedy, H. 192  
 Kessler, S. 139  
 Khanna, R. 105  
 Kiesling, H. J.  
 Kilgore, S. B. 36, 41  
 Kimura, D. 138  
 Kirst, M. W. 104  
 Kitchen, A. 141  
 Klees, S. 215, 219  
 Koretz, D. M. 72, 75, 78, 79  
 Kotte, D. 126  
 Kozol, J. 15, 31  
 Krawczyk, N. 218  
 Kreft, I. 81  
 Krueger, A. B. 37, 38, 40  
  
 Labov, W. 122  
 Ladd, H. F. 38  
 Lahire, B. 2  
 Lamb, S. 16, 17, 18, 141, 264  
 Lareau, A. 3, 5, 103  
 Lauglo, J. 54  
 Lavy, V. 142  
 Lazar, I. 124  
 Le Pore, P. C. 143  
 Leader (*The Guardian*) 51  
 Lee, V. E. 37, 41, 141, 143  
 Leseman, P. P. M. 121  
 Leslie, D. 54  
 Lester, J. 268

- LeTendre, G. K. 32  
 Levacic, R. 57  
 Levin, H. M. 28  
 Lingard, B. 146  
 Linn, M. C. 136  
 Lippmann, L. 260  
 Lloyd, C. 211  
 Lodge, A. 142  
 Loehlin, J. C. 121  
 Long, D. 34, 35, 36  
 Lord, F. M. 78  
 Loxley, W. A. 31, 32, 33, 34, 35, 36  
 Lucas, S. R. 79, 80, 101, 104  
 Lupton, R. 18, 55, 62  
 Lutkus, A. D. 26  
 Lynch, K. 142, 192, 207  
 Lyons, M. 142
- Mac an Ghaill, M. 142  
 Maccoby, E. E. 136  
 Machin, S. 61, 192  
 Mackin, S. 140  
 Madden, R. 258  
 Mael, F. 143  
 Manski, C. F. 31  
 Mare, R. D. 30  
 Marks, G. 264  
 Marphatia, A. 215  
 Marrett, C. B. 30  
 Marsh, H. 146  
 Marshall, G. 50  
 Martin, J. 138  
 Mazzeo, J. 70  
 MCEETYA 263, 265, 266  
 McEwan, P. J. 37, 38  
 McKenna, W. 139  
 McKinnon, M. 146  
 McMahan, D. 54  
 McNabb, R. 137  
 McNally, S. 140  
 McPartland, J. M.  
 McRae, D. 263  
 Mendick, H. 143  
 Mestres, J. 165  
 Metcalf, H. 195
- Metcalf, K. K. 37  
 Meuret, D. 157  
 Michaels, R. J. 80, 81  
 Mickelson, R. 9  
 Miles, P. 137, 140, 145  
 Miller, L. 139  
 Miller, R. J. 29  
 Mills, C. 50  
 Mirel, J. E. 15  
 Mirza, H. S. 53, 145  
 Modood, T. 53, 201  
 Moe, T. M. 37  
 Molina, S. 2004  
 Montagnes, I. 31  
 Moore, J. A. 26  
 Moran, R. 26  
 Morgan, S. L. 28, 78  
 Mortimore, P. 50, 54, 60, 124  
 Mosteller, F. 28, 30  
 Moynihan, D. P. 28, 31  
 Muller, W. 163  
 Munns, G. 268  
 Murray, C. 159  
 Murray, H. 121  
 Myers, K. 146
- NAEP 137  
 Nash, M. 141  
 National Science Board 104  
 Naylor, R. 137  
 NCES 137  
 NCVER 270  
 Nelson, J. 212, 214, 215  
 Neumarch, E. 145  
 Nickell, S. 56  
 Noden, P. 58, 59  
 Nowell, A. 72, 74, 75, 79, 99, 100  
 Nozick, R. 161  
 Nuttall, D. L. 141, 143
- Oakes, J. 30, 80, 104, 126, 141  
 Oaxaca, R. 80, 81  
 OECD 135, 138, 144, 155  
 OECD-CERI 155  
 Olneck, M. R. 39

- Olson, L. S. 29, 40  
 Orfield, G. 15, 25, 41, 100, 104  
 O'Riordan, C. 192  
 Osthoff, E. J. 104
- Papadópulos, J. 217  
 Parsons, S. 52  
 Passeron, J-C 2, 6, 200  
 Patton, C. 191  
 Peretti, C. 137  
 Perie, M. 26  
 Peterson, P. E. 37, 40, 41  
 Phillips, M. 26, 69, 99, 103, 104  
 Phipps, C. 60  
 PIRLS 136  
 PISA 136, 164, 165, 169, 170, 171,  
 172, 213  
 Plaza, O. 206, 207, 208, 220  
 Plewis, I. 53  
 Poleisel, J. 7, 15, 259  
 Pollack, J. M. 79  
 Porter, A. C. 71, 72, 104  
 Portes, A. 54  
 Power, S. 51, 52  
 Prais, S. 55  
 Preece, J. 195  
 Pritchard, A. M. 138, 146  
 Prost, A. 8  
 Putnam, R. D. 50, 51, 58
- Quintini, G. 56
- Radokovitch, R. 217  
 Raffe, D. 17  
 Rake, K. 52  
 Raudenbush, S. W. 81, 124  
 Rawls, J. 157, 158, 160  
 Read, B. K. 146  
 Reay, D. 13, 143, 144, 196  
 Revista de Educación 218  
 Reynolds, D. 55  
 Riccobono, J. 77  
 Richardson, J. T. E. 137  
 Rigney, D. 267, 268  
 Riordan, C. 143
- Rivero, J. 210  
 Rivkin, S. G. 29, 30, 54  
 Robinson, C. 270  
 Robinson, P. 63  
 Rock, D. A. 79  
 Roderick, M., 145  
 Roemer, J. 160  
 Rogers, L. J. 139  
 Ross, C. 141  
 Rothman, S. 267  
 Rowan, B. 29, 56  
 Rowe, K. 146  
 Rumbaut, R. G. 54  
 Rumberger, R. W. 128  
 Rury, J. L. 15  
 Rushforth, K. 50  
 Rutter, M. 54, 124
- Sahling, L. G. 80, 81  
 Sammons, P. 54, 55  
 Sanders, W. 29  
 Sarah, E. 135, 143  
 Sarra, C. 267  
 Saunders, J. 270, 271  
 Schagen, I. 59  
 Scheerens, J. 55, 124, 125  
 Schneider, S. A., 103, 104  
 Schoon, I. 191  
 Schuller, T. 49  
 Schveers, J. 55  
 Schwab, R. 258, 268  
 Scott, J. 139, 144  
 Scottish Executive 137  
 SCRGSP 258, 264, 269  
 Secada, W. G. 30  
 Sen, A. 161, 162  
 Sennett, R. 200  
 Serpell, R. 120  
 Sewell, T. 51  
 Sewell, W. H. 103  
 Shack, N. 209  
 Shavit, Y. 49, 61, 163, 173  
 Sheperd, P. A. 139  
 Silverman, S. 138, 146  
 SIMS 136

- Skeggs, B. 200, 201  
Skelton, C. 137, 139  
Slavin, R. E. 124  
Smith, D. 54  
Smith, G. 56  
Smith, J. 137, 140  
Smith, M. S. 28  
Smith, N. 58  
Smith, S. 54  
Smith, S. P. 80, 81  
Smithers, A. 56  
Smithson, J. S. 104  
Smrekar, C. 105  
Smyth, E. 9, 138, 140, 144  
Snijders, R. 81  
Somers, M-A. 38  
Sørensen, A. B. 28, 78  
Spender, D. 135, 141, 142, 143  
Stables, A. 138, 144  
Standing Committee on Education and Training, 137  
Stanworth, M. 142  
Statistics Commission 59n  
Stringfield, S. C. 124  
Stromquist, N. P. 138, 145  
Sukhnandan, L. 140  
Sullivan, A. 50, 52, 57, 60, 61  
Summers, A. A. 30  
Sutton Trust 192, 193  
Swift, A. 50  
Symons, J. 57  
Székely 208, 209
- Taylor, C. 58, 59  
Teddlie, C. 55  
Teese, R. 6, 7, 10, 14, 15, 16, 234  
Thomas, S. 141, 143  
Thompson, J. B. 11  
Thompson, N. 258  
Thorbecke, J. R. 118  
Thrupp, M. 18  
Times Educational Supplement 203  
TIMSS 136  
Tinklin, T. 137, 141, 142, 145  
Tizard, B. 54
- Tomlinson, S. 52, 54, 59, 60  
Tracey, L. 56  
Trannoy, A. 162  
Trewin, D. 258  
Troyna, B. 54  
Turnbull, B. 103  
Tysome, T. 192
- Uí Catháin, M. 142  
UNDP 215  
UNESCO 223, 224  
Urquiola, M. 219
- van de Gaer, E. 143  
van Dijck, M. 118  
van Heek, F. 123  
van Houtte, M. 143  
van Langen, A. P. 138  
van Zanten, A. 17  
Vermeulen, H. 54  
Vincent, C. 3, 18  
von Hippel, P. T. 29
- Walberg, H. J. 126  
Walford, G. 57  
Walzer, M. 158, 159  
Ward, L. 55  
Warren, J.R. 143  
Warrington, M. 142  
Watts, B. 261  
Weiner, G. 52  
Welch, A. 264  
West, A. 57  
Whitty, G. 50, 54, 57, 60  
Williamson, S. 26, 72, 100  
Willms, J. D. 31  
Wilson, E. O. 138  
Wilson, F. D. 26  
Wilson, W. J. 103, 105, 106  
Wintour, P. 192  
Witte, J. F. 37, 38  
Wolfe, B. L. 30  
Woodhouse, G. 55  
Woodley, A. 137  
Woods, P. A. 57

Woodward, L. J. 144  
Wu, S-C. 128

Yang, M. 55  
Youdell, D. 54, 60  
Young, D. 144  
Young, I. M. 119

Young, M. F. 118, 119  
Younger, M. 142, 146  
Yun, J. T. 100, 104

Zhu, Pei 37, 38, 40  
Zimmer, R. 105

# Index of Subjects

- ability grouping 79
- ability setting 54
- ability streaming 4
- Aboriginal and Torres Strait Islander People 260, 262
- Aboriginal Consultative Group 260
- Aboriginal Education Policy Task Force 262
- Aboriginal Medical Services 260
- absenteeism 267
- absolute standards 41
- academic ethos 55
- academic values (in teaching) 2
- academies (British schools) 58
- accessibility of education 126ff
- Accessibility of Secondary Education* (research project in Netherlands) 129
- accountability 274
  - pressures to greater 69
  - provisions under the NCLB (*q.v.*) 40
- achievement differences – extent of**
  - absolute vs. relative 126, 129
  - black-white (US) convergence 73-74, 75, 82ff, 92, 99
    - persistence and causes 35, 102
  - Latino-white (US)
    - convergence 73, 82ff, 92, 99
    - score gaps in 1992 95, 98
    - persistence and causes 39, 102
- between- and within-school 30
- indigenous Australians – 257-277
  - absenteeism 267
  - and *Reconciliation* 262
  - attendance 267
  - bereavement 258
  - cultural values 260
  - employment status 258
  - equity vs. cultural identity 262
  - field of study participation 269
  - forced removal of children 260
  - gender differences 266
  - health issues 258, 261
  - higher education 268f
  - historical overview 258
  - home circumstances 261
  - policy options 272ff
  - post-school destinations 267, 268f
  - retention rates 269
  - review of indicators 258ff, 263ff
  - socio-economic context 257ff
  - socio-economic status 266
  - student engagement 267f
  - study resources 261, 266
  - studying indigenous history 262
  - teacher cultural sensitivity 268
  - unemployment benefits 271
  - university award completions 270
  - vocational education 263ff, 270ff
- indigenous people 257-277
- ‘long tail’ of low achievement 59
- minorities, US, long-term 70, 92
- reporting gaps 69
- sub-Saharan Africa 223ff
- United States, long-term 70, 92
  - reporting on sub-groups 40
- achievement differences – explanations**
  - (see also *intelligence debate; heredity and intelligence*)
  - environmental explanations 122ff
  - choice processes in education 123
  - compensatory effects of school
    - relative effects for groups 125
  - developing world 248f
  - ethnicity and gender ignored in
    - early social theory 122
  - family influences 122
  - language differences 122, 123
  - material and financial constraints 122

- rational action theory 123
- relative influence of home and school *Coleman Report* (q.v.) 124
- school climate and other school factors 123, 124
- value-added research 124
- reproduction theory 123  
(see Chapter 1, this volume)
- as deterministic 123
- cultural capital (q.v.) 123
- culture-theoretical viewpoint 122
- economic capital (q.v.) 123
- social capital (q.v.) 123
- school effectiveness research
- stress on social class effects 125
- school career research 123, 125
- ad hoc explanations 123
- school effects
- differential sub-group effects 124
- Adelaide Declaration 263
- admissions powers (of schools) 59, 63
- affirmative action policies 103
- Africa 215, 233ff
- African Americans  
(see *achievement differences*)
- track segregation 9
- students 30
- vouchers 37
- African-Caribbean students 51, 53
- Angola 239n
- Argentina 216, 219
- Arts and Humanities Citation Index* 24
- ascribed status 49
- Asian students 53
- aspirations 55
- assessment
- coursework component in GCSE 51
- external, and low SES students 60
- Assisted Places Scheme* 57
- Atlanta 29, 30
- Australia 16, 213
- baccalaureat, French 7, 8-9, 12
- bachillerato*, Spain 5
- Baltimore 29, 30
- Bangladesh 247n
- Bangladeshi students 53
- Beca Presidente de la República* 219
- Benin 226, 231, 239n
- black boxes* 27
- blaming the victim* 54
- Bolsa Escola* 219
- books in home 35
- books in school 35
- Botswana 231
- boys
- the 'new disadvantaged' 12-13, 51  
(and see under gender)
- Brazil 219
- Brown Vs. Board of Education* 25, 38
- budget constraint (lending policy) 215
- Burkina Faso 231, 239n, 243
- Burundi 226
- busing 26
- Cambridge 193
- Cameroon 226, 239n, 247, 248
- Canada 213
- Cape Verde 231
- capital
- forms of 50
- 'bonding' (social inclusion) 51, 58
- 'bridging' capital 51, 58
- economic 50, 123
- cultural 3, 7, 16, 50, 57, 123
- social 3, 50f, 54f, 57f, 62, 123, 209
- catchment area 50, 57
- Census Bureau (US) 86
- Central African Republic 239n
- Centre for Post-Compulsory Education and Lifelong Learning 271
- Chad 231, 247
- chalkboards 35
- Charlotte-Mecklenburg 9
- Charter Schools (USA) 17, 37, 105
- Cherbourg State School 267



- child-rearing
  - social differences 7
- Chile 38, 208, 210, 213, 216, 218, 219
- choice* 18, 23, 36ff, 40, 56, 57, 58, 105
  - fears of declining pupil mix 57
- Cincinnati 37
- civil rights movement 74
- class size 27, 29, 32, 35, 55
  - targetted vs. untargetted cuts 55, 62
- class homogamy (in marriage) 10
- class integration (through curriculum) 9f
- Cleveland 37
- cognitive demands 6, 7, 9, 10, 14
- cognitive stimulation 6
- Coleman Report 23ff, 37, 38
  - (*Equality of Educational Opportunity*)
- Columbia 38, 219
- Commonwealth Parliament 261
- Community Development Employment Programs 271
- compensatory education 123-124
- compensatory effects 29
- compensatory measures 220
- compensatory resources 40
- compositional effects of schooling 62
  - negative effect on test score gaps 43
- comprehensive ideal (of schooling) 59
- Comprehensive School Reform Quality Center* 40
- Congo 231, 239n
- Conservative Party 57, 58
- cost-sharing (State, families) 218
- Côte-d'Ivoire 226, 231, 239n
- credentials inflation 61
- Cuba 33n, 205
- cultural demands 6, 14
- cultural ethos 6, 16
- cultural genocide 260
- curriculum 6-15
  - and school effects 27
  - as a historical resource 18
  - as a sorting device 6, 7
  - dumbing down 104
  - effect of changes over time 104
  - elite influence over 39
  - family perceptions of relevance 247
  - gender 9-12
  - hierarchies 4, 8, 12, 15
  - minorities' influence over 39
  - national (in Britain) 59, 60
  - options and their costs 50
  - race/ethnicity 9
  - religion 247
  - secondary and higher education 12-15
  - structure, streams 4, 6, 9
    - persistence 7-9
    - Australia 7-8
    - France 6, 12, 13
    - social and academic manipulation 8
    - linked with higher education 12-15
  - tracks (*q.v.*)
- debt, external 215ff, 220
- debt swaps 216
- Dayton (Ohio) 37
- decentralisation 205, 218
- Demographic and Health Surveys 239n
- Deficiency Hypothesis* 122
- Difference Hypothesis* 122
- depression 52
- devolution of management 17
- DfES 55, 60
- distinction, personal 6, 8, 11
- diversity (see '*choice*')
- drug use 218
- drop out (see *early leaving*)
  
- EAL 55, 57
- early childhood and inequality 2
- early leaving 5, 218
  - causal influences 127, 128
  - cross-national differences 127
  - 'frustration self-esteem' model 128
  - gender differences 127-128

- individual factors 128
- Moroccan students in Netherlands 127
- Netherlands 127
- 'participation identification' model 128
- proximal and distal factors 128
- push and pull factors 128
- school factors 128
- East St. Louis 15
- ECLAC 218
- economic dependence on school 1
- Educational Amendments Act, 1972 145
- Education Act (1988) 59
- education and life chances 49
  - occupational status 49
  - quality of life 49
- education production function 27ff (see *production function*)
- education systems
  - segmented 208, 209
  - structural disparities 224, 243
- educational expansion
  - compatible with more inequality 63
- educational participation differences 50 (see *achievement differences*)
  - sub-Saharan Africa
    - gender, social, regional gaps 242ff
    - demand factors 245f
    - social class 50
- educational failure, public theories 16
- educational inequality (see under *achievement differences -extent of and achievement differences-explanations*)
- educational policy 36-38, 41, 56ff, 61-63
  - access to higher education 103
  - and social class 49
  - cannot compensate for society 63
  - challenging students academically 104
  - curriculum change 104
  - non-educational policies 103, 105
  - preserving racially diverse settings 105
  - racial isolation, minority schools 103f
  - raising absolute standards 69
  - reducing achievement gaps 69
  - school admissions policies 105
  - school composition 105
  - school funding 105
  - tracking 103
  - welfare policies 105
  - work and housing policies 105
- developing world
  - decentralisation 205, 216, 218
  - focalised policies 219
  - infrastructure 205, 211
  - Latin America 211ff, 218ff
  - non-educational policies 20
  - parents 218
  - privatisation 216
  - quality management 218
  - quality of teachers 205, 211
  - stakeholder consensus 205, 212f, 220
  - student performance 205, 211, 216
- educational provision
  - concentric expansion 245
  - geography of growth 245
- educational resources (see *school resources*)
  - 'negative resources' 16
- educational statistics 223
  - not reporting SES 61, 210
- efficiency gains 37
- elites (and schooling) 212-213
- England 13, 17
- equality
  - 'advantage for the disadvantaged' 157
  - and merit 158f
  - as a social construct 156
  - as accessibility of education 117, 118
  - as differential effectiveness

- ascriptive and achieved attributes 159
- educational opportunity 23, 38ff
- Equality of Educational Opportunity* (Coleman Report) 8, 23ff, 39, 41, 74
- meritocratic perspective (see *merit*)
- Equatorial Guinea 239n
- equity indicators 155ff
  - European Union 155
  - and equality (difference) 155, 156f
- Eritrea 231
- Escuela Nueva* 219
- ESRC 194
- Ethiopia 226, 233, 243
- ethnicity 52-54
  - high aspirations 51
- ethnographic research 54
- evidence-based practice 40, 41
- examinations
  - cultural bias 60
  - Britain (see also *GCSE*) 60
- examiners 6
- exclusion 207, 209
- expenditure 74, 209
- failure at school
  - (see *achievement differences*)
- family
  - background 2f, 23, 26, 31f, 36-39, 41, 54
  - changes, minority groups 85ff, 92, 93
    - black-white vs. Latino-white 42
  - attitudes to education 247
  - costs 245, 247
  - impact of changes in 72, 74, 100
  - income 74
  - measuring characteristics 79f
  - strategies 2, 119, 213
- Federal Dept of Aboriginal Affairs 260
- Federal Legislation (USA) 40
- fees 245n, 247
  - abolition 247, 248
- feminisation (see under *teachers*)
- Five Year Strategy for Children and Learners* 61
- fixed effects models 29
- Forum of African Women for Education 236n
- France 7, 12, 16, 17
- Free School Meals* 55, 57, 58, 59, 60, 62
- FSM (see *Free School Meals*)
- further education expansion
  - (in Britain) 61
- Gabon 226n, 239n
- Gambia 239n
- GCE 52
- GCSE 7, 51, 52, 60, 61
  - decline in social class inequalities 60-61
  - ethnic relativities 53, 54, 61
  - tiered entry to 54
- gender gaps – *achievement and participation***
  - ability test findings 136
    - verbal ability 136
    - quantitative, mathematical 136
    - spatial 136
  - Abitur* 137
  - adult population attainment 135
  - attention from policy-makers 61
  - baccalaureat (France) 137
  - cognitive abilities, meta-analyses 136
  - curriculum 60
  - in developing countries 210-211, 217ff
    - wage income 217
    - in school participation 217
    - in higher education 217
    - in workforce participation 217
    - reproduction by schooling 218
  - early leaver outcomes 52
  - early years of school 52
  - examinations performance 137
    - England and Wales 137
    - A-level passes 137
  - explanations–trends 126, 127

- family structures and size 52
- GCSE (*q.v.*) 51
- historical trends 136, 137
- interaction with class, etc. 126-127
- labour force participation 52
- labour market disadvantage 52, 63
- mathematics achievement 138
- mathematical literacy 137
  - cross-national variation 137
  - how explained 137
- measurement approaches 135, 136
- 'moral panic' 52
- NAEP (*q.v.*) findings 137
- occupational attainment 52
- PIRLS (*q.v.*) findings 136
- PISA (*q.v.*) findings 136
- reading literacy 136
  - cross-national variation 136, 137
- reviews of research 126
- science achievement 136, 138
- secondary education courses 138
  - cross-national variation 138
- SIMS (*q.v.*) findings 136
- social class relativities 51-52
- sub-Saharan Africa 228ff, 238-239
  - cross-national differences
  - evolution over time 235f, 239
  - explanations of girls' disadvantage 233 & n, 239
  - gaps greater when families poor, 242
  - gaps grow across education 229 233
  - intervention programs, impact 238
  - primary education 229
  - ratios of girls to boys in education
  - rural and poor families 242
  - social class differences 239ff
  - why gender gaps a problem 236 & n
- subject enrolment rates 52, 60, 126
- tertiary education achievement
  - Britain 137
  - first-class honours 137
  - tertiary education courses 138
    - feminisation of fields over time 138
    - doctoral graduates 135
  - tertiary graduation rates 135
  - TIMSS (*q.v.*) findings 136
  - upper secondary graduation rates 135
  - vocational training 52
  - working-class boys 51
  - working-class girls 52
- gender differences – causal processes** (see 138f, 147f)
  - age changes in ability 139
  - assessment approaches 139
    - coursework 140
    - coursework in GCSE assessment 140
    - debates in Britain 140
    - examinations and writing skills 140
    - factual and episodic detail 140
    - multiple-choice 140
    - narrative and descriptive skills 140
    - open-ended and sustained tasks 140
    - under-achievement of boys 140
  - brain size 138
  - education systems, their effects 139ff
    - course or track differentiation 140
      - cross-national differences 140
  - evolutionary psychology 138
  - genes and environment interaction 138f
  - innate differences 138
  - school organisation and culture (*q.v.*)
  - social biology 138
  - socialisation 139ff
    - egalitarian attitudes in children 139
    - gender categories in childhood 139

- gender stereotypes in childhood 139
- gendered behaviour, infancy 139
- influence, labour market changes 139
- influence, political participation 139
- occupational stereotypes in childhood 139
- social construction of knowledge 139
- spatial ability 138
- sub-Saharan Africa 233 & n, 239
- trends in test score differences 139
- gender – policy interventions 145ff**
  - anti-discrimination legislation 145
    - in the United States 145
    - in Britain 145
    - subtle vs. overt discrimination 145
  - non-stereotyped courses 145-146
    - science and technology 146
    - Britain 146
    - girl-friendly information 146
    - psychological support 146
  - single-sex classes or schools 146
    - to combat male low achievement 146
    - to promote girls' confidence 146
      - computer science classes 146
      - physics classes 146
      - mathematics classes 146
    - curriculum and teaching change 146
    - school improvement measures 146
  - 'boy friendly' approaches 146
- gender – school organisation and cultural effects**
  - behavioural differences 142
  - classroom behaviour 141
  - classroom interactions 141
  - computer sessions 141
  - control behaviour of teachers 141
  - cultural activities in school 142
  - feedback from teachers 141
  - gender construction of subjects 143
  - gender mix within schools 143
    - co-educational classes 143
    - mixed-gender schools 143
    - single-sex classes 143
  - girls' lack of confidence 142
  - 'hands on' activities 141
  - laboratory work 141
  - 'laddishness' 51, 141, 142
    - male domination of classrooms 141
    - protecting against failure 142
    - protecting masculinity 142
    - protecting self-worth 142
  - masculine identity 142
  - peer expectations 142
  - peer interactions 141
  - power inequalities in classrooms 142
  - resistance to academic image 142
    - 'effortless achievement' 142
  - single-sex schools 57, 143
    - and academic grades 143
    - and subject participation 143
    - Catholic schools 143
    - culture of schools, classrooms 143
    - international studies 143, 144
    - multi-level modelling 143
    - selective sector of schooling 143
  - sport 142
  - teacher assessment bias 142
  - teacher expectations 141, 142
  - teacher-student interactions 141
    - between-school gender gaps 141
      - secondary schools 141
      - high/low performing schools 141
- influence on subject participation* 141
- subject packaging 141

- differential provision of options
  - 141
- encouragement / discouragement
  - 141
- teacher gender* 144
  - effects attributed to feminisation
    - 144
  - feminisation of teaching force
    - 144
- gender – social factors**
  - class integration and curriculum
    - 9-12
  - construction of gender 144
  - cultural identities and curriculum
    - 9-12
  - ethnicity 144
  - ‘failing boys’ 145
  - multiple gender identities 144
  - social class 9-12, 144
  - working class and middle class 145
- General Certificate of Secondary Education (see *GCSE*)
- Ghana 239n
- Girls into Science and Technology* 145
- ‘glass ceilings’ 119
- globalisation 214
- Grandes Écoles* 12
- Guinea 233
  
- habitus* 2, 11
- hard options* (see *school subjects*)
- Harvard 28
- heredity (see under *intelligence debate*)
- higher education – general**
  - academic driving social selection 61
  - and secondary curriculum 12-15
  - British 13
  - college admission policies 103, 105
  - course hierarchies 12
  - employment gains from 103
  - expansion and widening inequalities
    - 61
  - expenditure (France) 13
  - inequality (see *higher education/inequality*)
    - in France 12, 13
    - institutional hierarchies 12-15
    - intensifying competition for entry 61
    - massification 12
    - need for improved access 103
    - provisional allocation of places 13
    - student progression (USA) 13
    - student self-selection 13
    - transition and prior attainment 50
    - tuition fees 61
- higher education – and inequality 191ff**
  - access schemes 193, 194, 199, 200
  - and choice between institutions
    - 195ff
  - and state and private schooling 194
  - non-traditional entrants 194ff
  - cultural mix 199, 201
  - degree holders and the workforce
    - 191
  - ending of binary divide in UK 192
  - ethnic/racial access 195, 201
  - aspiration levels 201
  - ethnic mix 201
  - racism 202
  - expenditure per student 193
  - institutional hierarchies 192, 197, 203
  - league tables 198-199
  - newer universities and spending 193
  - segregation, class and racial 198, 201
  - social access 191, 192, 203
    - ethnic barriers 195
    - examination grades 195, 196
    - financial barriers 192
    - Groucho Effect* 200
    - older universities 192, 193
    - self-exclusion 196-197, 198ff
    - self-selection 196f
    - time constraints and work 195, 196
    - travel constraints 195
    - trends 191, 203
    - working-class localism 195
    - status perceptions 197

- High School and Beyond* (survey) 36  
 Hispanic students 37  
 HIV/AIDS 218  
 household surveys 210  
 HSB 76, 77  
 home background (see under *family*)  
 homework 3  
 House of Commons 63  
 household economy 247  
 household surveys 223-224, 239  
  
 IADB 214, 216  
 IBD 218  
 IIEP 218  
 IMF 31, 33ff, 215, 216  
 income inequality 208  
     and education 208-209  
     need to reduce inequalities 63  
 income per capita 33, 34, 35  
 income tax, negative 27  
 Independent Schools Council 7  
 indigenous populations 220, 257-277  
 Indian students 53  
**Inequality** – *explanations*  
     underlying processes (summary)  
     106f  
     (see under *achievement differences*)  
**inequality** – *patterns*  
     (also see *achievement differences*)  
     developing world  
         and social class 210  
         theories 206ff  
         structural inequality 207  
         Latin America 208ff  
     and political philosophy 156ff  
     and justice 156f  
         neo-utilitarian 161  
         libertarian 161  
     and poverty in childhood 187  
         in workplaces 156  
     cross-national variations 163ff,  
         187ff  
         equitable nations, most effective  
         188  
 instructional materials 32  
  
 intelligence debate 120  
     development of intelligence 121  
     group and individual differences  
         120  
     intelligence as largely hereditary  
         120  
     relative influence, nature, nurture  
         120  
     test scores affected by education  
         120  
     test scores as not culture-free 121  
     what do IQ tests measure? 121  
     group differences and environment  
         122  
 International Centre for Girls’  
     Education in Africa 236n  
 International Council of the World  
     Education Forum 214  
 IRT 78  
  
 Karmel Report 260  
 Kenya 239n, 243  
 kindergarten 30  
 Korea 205  
 Koorie 272  
  
 laboratories 38  
 Labour government (UK) 51, 57  
 labour market 52  
     social class 50  
 laddishness’ (see under *gender school  
     organisation and culture*)  
 language  
     as cultural capital (*q.v.*) 50  
     formal emphasis in home learning  
         2-3  
     formal emphasis in school 2  
     mastery 6  
 language of teaching 2  
 Latin America 30-31, 33, 35, 205-222  
 law of declining inequalities with  
     expansion 228  
 law of scarcity favouring elit  
     consumption 242  
 league tables 56, 59

- learning at home 28  
 learning growth 40  
     and school year 29-30  
     social class differences 62  
*Le Monde* 12  
 Lesotho 231  
*libraries* 38  
 linear equations 6  
 literacy  
     strategies for raising (Britain)  
         59, 60  
 literary and artistic sensibility 10  
 London Metropolitan University 192  
 LS (program of NCER, *q.v.*) 76, 81  
 Luton University 193
- Madagascar 231, 233  
 Malawi 239n  
 Mali 231, 233, 243, 246, 247, 248  
 markets (see under *marketisation*)  
 marketisation 17, 57, 58  
 mathematics achievement tests 78ff  
 mathematics test scores 78ff  
 Mauritania 226, 231  
 Mauritius 231  
 merit  
     conceptual, measurement issues  
         118ff  
     Increased Merit Selection 119  
     studies on influence of merit 119  
     ‘myth of merit’ 119  
 Mexico 219  
 military expenditure 215  
 Millenium Development Goals 229  
 Milwaukee 38  
 Ministère de l’Education nationale 12  
 Ministerial Council on Education,  
     Employment, Training and Youth  
     Affairs 263  
 mixity (see *pupil mix*)  
 mobility (residential) 50, 63  
 mobility (social)  
     compatible with extreme inequality  
         63  
 Mozambique 226
- multiculturalism 39, 261  
 Multiple Index Cluster Surveys 239n  
 NAEP 26, 70, 71, 73, 74, 76, 78  
 Namibia 226, 231, 239n, 243  
 National Aboriginal and Torres Strait  
     Islander Education Policy 262  
 National Assessment of Educational  
     Progress (see NAEP)  
 National Literacy Strategy (NLS) 60  
 National Pupil Database 61  
 National Student Scholarship Program  
     219  
 Navaho (language) 39  
 NCLB 40, 41, 69, 103, 105  
 NEET 52  
 NELS 72, 76, 77, 78, 128  
 Network for Girls’ Education 236n  
 New Jersey 16  
 New Labour 58  
 New York 37  
 New Zealand 38  
 Niger 231, 243, 245n  
 Nigeria 239n  
 NLS 76, 77  
 NLSY 72  
 No Child Left Behind (see *NCLB*)  
 North Carolina 9  
 non decision-making 207  
 non government organisations 214  
 numeracy  
     strategies for raising (Britain) 59, 60
- Oaxaca technique 80  
 occupational attainment, social class  
     50  
 OECD 266  
 OFSTED 62  
 OREALC 218  
*Overcoming Indigenous Disadvantage*  
     (Report) 258  
 Oxford Brookes University 193
- Pakistani students 53, 61  
 parenthood, lone 52



- parental choice of school 55
- parents and education 103, 212, 218
- parenting  
and poverty 50
- parents' education 28, 35
- parents' income 28
- parents' occupational status 28
- parents (status culture differences) 3
- parental strategies 57
- PEIC 33-34, 35n
- peer composition 26  
(see also *pupil mix, intakes*)
- peer cultural resources 12
- peer effects 28, 38, 57
- peer group culture 51, 62
- Peru 209, 210
- PISA 33, 34, 164, 165ff, 213, 266
- policy (see *educational policies*)  
education 36-38, 41  
for disadvantaged 41
- policies (non-educational) 103  
(see also under *educational policies*)
- poverty 206, 214, 219 and see *Free School Meals (q.v.)*  
educational provision 246  
family stress 50  
first challenge of equity 248  
minority groups 101-102
- Poverty Reduction Strategy Papers 215
- pre-school 3
- precocious marriage 233n
- precociousness 3
- privatisation 37, 218
- production functions 27ff
- proficiency standards 40
- Program P-900 219
- PROGRESA 219
- puberty 233n
- public attitudes to education 212, 213
- pupil-mix 9, 16, 18, 57, 58, 59,  
62-63  
critical mass, middle-class students 58  
school recruiting able students 57  
trends under quasi-markets 57  
(see also under *race and ethnicity*)
- pupil-teacher ratios 74, 244f
- qualifications and inflation 61
- quasi-markets 57, 58
- Queensland 267
- race and ethnicity 52-54  
(see under *achievement differences*)  
educational success 54  
'ethnic disadvantage' 53  
exam results 53  
family size, structure 53  
further education 53, 54  
GCSE (*q.v.*) access, results 53,  
54, 60  
labour market disadvantage 54, 63  
labour market outcomes 54  
mix in schools 58  
post-compulsory education 53  
setting by ability 54  
social capital 54  
social class 53  
staying on at school 53  
under-achievement 52
- racial composition
- Racial Discrimination Act 260
- racism 53, 54, 205, 207, 257, 268, 272  
curriculum and assessment practice 60
- Raising Boys' Achievement 146
- RAND 73
- randomised experiments 29
- reading 50
- region  
developing countries 35  
reporting of achievement 40
- Reproduction* (Bourdieu and Passeron) 6
- reproduction (see under *achievement differences explanations*)
- residential segregation 15
- residential mobility 17
- Rwanda 226, 233, 239n

school autonomy 37, 218  
 school characteristics  
   changes over time 88ff, 92  
   impact on minority achievement 100f  
   measuring 79  
   minority composition 90, 92  
 school choice (see *choice*)  
 school composition effects 57  
 school effects 23, 27ff, 30  
   and classroom level 55  
   in poorer countries 31  
   international research 31ff  
   national comparative issues 30-31  
   policy debates 36ff  
   size vs. process in research 40  
 school effectiveness 54-55, 61-62, 124  
   differential effects for sub-groups 124  
   growing emphasis on class 124  
   unexplained variance 55  
 school ethos 55  
 school fees 245, 247  
 school facilities 27  
 school infrastructure 32  
 School Life Expectancy (SLE) Index 244  
 school organisation 32  
 school performance  
   value-added measures 60  
 school resources 23, 24, 27ff  
   developing countries 31ff, 34, 36  
   sub-Saharan Africa  
     concentration of resources 226ff  
     consumption of resources 226ff  
     inequality in use of 226ff  
   ‘how used?’ vs. ‘how much?’ 29  
   limited variation in USA 31ff  
   threshold effect 32, 35, 36  
 school sector 35  
 school segregation (see *segregation*)  
 school size 17, 35  
 school restructuring 37

**school subjects 4**  
   as intellectual resources 12  
   cognitive and cultural demands (*q.v.*)  
   ‘hard’ and ‘soft’ options 7, 8, 10, 11, 14  
   subject hierarchies 4  
   subject streams (France) 7  
   to challenge the brightest 7  
   *specific subjects or areas:*  
     Art 10  
     Chemistry 11  
     French 8  
     German 8  
     humanities 6, 8, 11  
     engineering 52  
     Latin 8  
     Literature 10, 11  
     mathematics 4, 6, 52  
     modern general physical sciences 8  
     Physics 10, 11  
     preparatory mathematics 8, 11  
     sciences 6, 7, 11, 52  
     technical 7  
     technology 52  
     vocational 7, 8, 11  
 school systems 5-18  
   (see also education systems)  
   dual & unitary status in USA 25  
 schooling  
   effects 54-56  
   single-sex 57  
   and social differentiation 209  
 schools  
   academies 58  
   bankrupt schools 38  
   Catholic 16, 36  
   comprehensive 17, 51  
   denominational 56  
   disadvantaged 57  
   major obstacles they face 62, 118  
   faith-based 58  
   high-poverty, urban 103  
   grammar 51  
   independent 7

- 'non-selective' 58
- pooling of resources 16, 17
- poor 16
- private 16, 18, 36, 37, 38, 56, 212-213
  - academic focus 56
  - class divisions 56
  - creaming 56
  - race-ethnic composition changes 88f
  - relative success 56
- 'public' (Britain) 56
- selective (see also private) 57
- specialist 58, 59
- urban 16
- schooling effects 30, 54-56 (see also *school effects*)
- Science Citation Index 24
- Scotland 17, 38
- secondary education
  - lower 4-6
- segregation 18
  - Index of Segregation 57
  - in the United States 9, 15, 24ff, 41ff
    - desegregation 9, 24, 26, 74
    - high school track 9
    - legal segregation 24
    - racial 15, 24ff
    - resegregation 24
  - poor schools 57
  - social (in schools) 57, 58, 59, 60
- self-concept 3
- self-selection, student 5
- selection by schools 57
  - covert selection 58
- selection by mortgage* 57
- Senegal 239n
- Sex Discrimination Act, 1975 145
- sexuality (and student protests) 218
- single-sex schooling 57 (see *gender single-sex schools*)
- social capital (see under *capital*)
- social class 49-51, 61-63
  - achievement relativities declining 60
  - achievement, US Catholic schools 36
  - differences in learning growth 50
  - early intervention 50
  - educational attainment 60
  - educational resources at home 50
  - financial advantages 50
  - in Britain 49-51
  - need for early intervention 50
  - occupational status 50
  - social and cultural privilege 50
  - test differences, early childhood 50
  - widening gap during schooling 50, 62
- social distance strategies 18
- social inclusion 62
- social inequalities (see *achievement differences*)
- social polarisation 57
- social resistance 12
- socialisation (differential) 2-3, 10-11, 50
- Social Science Citation Index 24
- sociology of education 23
- South Africa 226n, 231
- South Bank University 192
- Spain 5, 16
- Spanish (language) 39
- speech
  - social patterns 2-3
  - as writing 2
- standards-based reform 70
- Statistics Commission 59
- status culture 10, 11
- status position 18
- stolen generations* 260
- streams (see under *curriculum*)
- Structural Adjustment Programs 215ff
- structural barriers 1
- structural inequality 15
- student achievement, reporting 40
- student body characteristics 27
- student disengagement 5
- Success for Boys (2005-2008) 146
- Sudan 239n

- Supreme Court (USA) 16, 38  
 Swaziland 231  
 Swann report (1981) 53  
 Sweden 38  
 symbolic violence 200
- Taiwan 205  
 Tanzania 231, 239n
- teachers  
 and disadvantaged schools 56  
 and comprehensive schools 56  
 and private and selective schools 56  
 as products of selection 5  
 attitudes to educational reform 214  
 availability of qualified 32  
 bias in assessments 60  
 educational background 74  
 effects 27, 29, 30, 55, 62  
   inferred, not measured 55  
 employment in remote areas 248 & n  
 experience 27, 32, 35, 74  
 feminisation of teaching force 51  
 gender and school attendance 248  
 lower secondary 4  
 malaise 5  
 qualifications 27, 32, 40, 41  
 qualities 27, 55  
   academic ability 56  
   knowledge of mathematics 56  
   need for better data on 62  
   verbal abilities 55  
   where received training 55  
 shortages 56  
 status 56  
 supply 56  
   for poor schools 56, 57  
   distribution of teachers 56, 62  
   incentives to attract 56, 62  
 salaries 29, 56, 205, 244f, 247  
 subject orientation 8  
 teacher training 14, 32  
 teacher unions 214
- Technical and Further Education 258, 272  
 Tennessee class size experiment 29
- testing and standards 59-60  
 tests and cultural bias 60  
 textbooks 31, 32, 35  
*The Independent* 7, 13  
*The Times* 13  
*Times Higher Education Supplement* 61  
 TIMSS 32, 33, 34, 35  
 Title 1 (*see under* NCLB) (*see school resources*)  
 Title IX 1972 145  
 Togo 231, 247  
 tracks, tracking 9, 30, 60, 70, 79, 91ff  
   changes in US 79f, 95, 98, 103  
   effect on test scores 74, 92f, 95f, 101  
   African American students 91, 95  
   Latino students 91, 95  
   self-reported 79-80  
 tuition (private) 50  
 tutoring 40, 41
- Uganda 31, 239n, 247  
 UN Office for Education in Latin America and the Caribbean 218  
 UN Initiative for Girls' Education 236n  
 UNICEF 1, 228, 236  
 UNESCO 210  
 UNESCO Institute of Statistics 223, 224  
 United Kingdom 213  
 United States of America 15, 23
- universities (*see also higher education*)  
 elite, and private schools 56  
 in Britain 61  
 University of Indiana 37  
 urban residential differentiation 4, 15, 17  
 US Department of Education 40
- value-added 40-41, 59-60  
 verbal achievement 27  
 verbal expression (poverty of) 39

- VCAA 6
- Victoria 17, 272
- violence (family) 218
- violence (in schools) 74
- vocational training
  - school-based 6
- vouchers 23, 36ff, 105, 218, 219
  - reduced government spending 218f
  - and stratification 37ff
- wage differentials 217
- War on Poverty 74
- Western Australia 258
- white flight* 26
- Whitlam Labor government 260
- Women's Education Equity Act 145
- World Bank 215, 216
- Youth Cohort Study* 53, 61
- Zambia 239n
- Zimbabwe 226, 239n, 243, 248
- zoning 17, 18

# International Studies in Educational Inequality, Theory and Policy

This is the second volume of a set of three. The titles of the other volumes are: Volume 1: Educational Inequality: Persistence and Change. Volume 3: Inequality: Educational Theory and Public Policy. These volumes together form the work International Studies in Educational Inequality, Theory and Policy, edited by Richard Teese, Stephen Lamb and Marie Duru-Bellat.

# International Studies in Educational Inequality, Theory and Policy

Volume Two

Inequality in Education Systems

*Edited by*

Richard Teese

Stephen Lamb

Marie Duru-Bellat

*With the assistance of Sue Helme*

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## VOLUME TWO

### TABLE OF CONTENTS

List of Tables	vii
List of Figures	xi
List of Contributors	xiii
List of Abbreviations and Acronyms	xvii
Acknowledgements	xix
Foreword	xxi
1 Social Inequality in French Education: Extent and Complexity of the Issues <i>Marie Duru-Bellat</i>	1
2 First- and Second-Generation School Segregation and the Maintenance of Educational Inequality <i>Roslyn Arlin Mickelson</i>	21
3 Structural Inequality in Australian Education: Vertical and Lateral Stratification of Opportunity <i>Richard Teese</i>	39
4 Distinctions, Representations and Identities among Middle Class Fractions in London <i>Stephen J Ball and Carol Vincent</i>	63
5 Education and Social Selection in Italy <i>Roberto Fini</i>	89
6 An Assessment of Educational Equity and Policy in Spain <i>Jorge Calero</i>	111
7 Equity in Educational Policy: A Norwegian Perspective <i>Petter Aasen</i>	127
8 Educational Inequality in Russia <i>Anna Smolentseva</i>	143
9 School Achievement in Italy: An Empirical View <i>Roberto Fini</i>	157
10 Persistent Inequalities in Uruguayan Primary Education 1996 - 2002 <i>Tabaré Fernández Aguerre</i>	177

11	Education Feminism, Gender Equality and School Reform in Late Twentieth Century England <i>Madeleine Arnot</i>	207
12	The Lagging Participation of Girls and Women in Maths and Science Education <i>Annemarie van Langen and Hetty Dekkers</i>	227
13	In the End is the Beginning: The Search for Gender Equality in English Education <i>Molly Warrington and Mike Younger</i>	243
14	Rurality and Inequality in Education: The Australian Experience <i>Anthony Welch, Sue Helme, Stephen Lamb</i>	271
15	Transforming School Education in China to a Mass System: Progress and Challenges <i>Stephen Lamb and Zhenyi Guo</i>	295
	Index of Names	315
	Index of Subjects	321

## LIST OF TABLES

2.1	Influence of Various Factors on CMS Middle and High School Students' Standardised Test Scores, 1996-1997	27
2.2	Typical Racial Composition of CMS Middle School Mathematics and High School Biology Classes by Track and School, 1996-1997	30
4.1	Parents' sector of employment	64
4.2	Forms of Local Social Relations	73
4.3	Choices of Child Care	75
4.4	Biographical Data	81
5.1	Italy - Proportion of Population Attaining Qualification Levels by Age and Year of Survey	91
5.2	Education indicators in OECD countries, 2001-2002	92
5.3	Family income, family spending and rate of spending by head of family's education level	96
5.4	Distribution of families by income category and head of family's education level	97
5.5	Correlation between father's level of schooling and son's level of schooling (Italy 1998)	98
5.6	Distribution of respondents by type of senior secondary school and final appraisal received at the end of junior secondary school (%)	100
5.7a	Distribution of respondents by type of senior school attended and parents' work status (%)	101
5.7b	Distribution of respondents by type of school attended and parents' qualifications (%)	102
5.8	Distribution of respondents by parents' qualifications and final appraisal at the end of junior secondary school (%)	103
5.9	Share of University of Milan enrolments from different administrative sectors by program type of schooling – 1999-2000 academic year	106
5.10	Share of enrolments from different program types of schooling by administrative sector – 1999-2000 academic year	106
6.1	Enrolment rates in different educational levels by nationality	115
6.2	Population (20-24) with at least upper-secondary education. European Union, 2004	116
6.3	Population with at least upper-secondary education. European Union countries, 2003, by age-band	117
6.4	Population aged 16-17 in Post-Compulsory Secondary Education by Social Class Spain, 2000	118
9.1	Proportion of the Population which has Attained at Least a Diploma at Senior Secondary Level, by Age Group, 2001	157
9.2	Proportion of the Population which has Achieved a University Qualification, by Age Group	158
9.3	Reading Literacy Scores of Students Aged 10 and 15 years	160
9.4	Percentage Distribution of Reading Literacy Ability at Pre-defined Levels	161

9.5	Rates of Participation in the Labour Market, by Gender and Level of Study, 25-64 year olds (2001)	164
9.6	Rates of Unemployment, by Gender and Level of Study – 25-64 year olds (2001)	165
9.7	Distribution of Reading Results on the Basis of Type of School Attended and Upper and Lower Thresholds of Competency (%)	169
9.8	Percentage Student Distribution by Parental Level of Education and Type of School Attended (2000)	170
9.9	Characteristics of School Type by Indicators of Quality (2000)	172
10.1	Diagram of the Reforms Implemented in Uruguay 1995-2005	180
10.2	General Description of the Evaluations Used (unweighted HLM bases)	188
10.3	Descriptive Statistics for Learning and Inequality Indicators	190
10.4	Chow's Test, Null Hypothesis: Structural Stability	191
10.5	Multiparameter H test for Private Sector Effects on Inequality	192
10.6	Final Model of Language & Maths Determinants, 1996, 1999, 2002	194
10.7	Model of Differential Effects in Language according to Social Class for 1999 and 2002	196
10.8	Model of Differential Effects in Maths according to Social Class for 1999 and 2002	198
10.9	Comparison of Possession of Luxury Items between 1996 & 2002	203
10.10	Comparative Distribution of Economic and Cultural goods	204
10.11	Factorial Structure compared for 1996, 1999 and 2002: Factorial Weights, Communalities, Eigen Values and KMO	205
12.1	Percentages of Tertiary ISCED-5A <sup>1</sup> Qualifications Awarded to Females in STEM Fields of Study in 2001	228
13.1a	Local Authorities in England where Both Boys' and Girls' Achievement in GCSE/Equivalent Examinations in 2004-05 was at Least 10 Percentage Points Below National Average Levels	250
13.1b	Local Authorities in England where either Both Boys' and Girls' Achievement in GCSE/Equivalent Examinations in 2004-05 was at Least 10 Percentage Points Below National Average Levels	251
13.2	Local Authorities in England where Both Boys' and Girls' Achievement in GCSE/Equivalent Examinations in 2004-05 was at Least 6 Percentage Points Above National Average Levels	251
13.3	Achievements of Students in England, in Key Stage 2 National Curriculum Assessments, by Ethnicity and Gender, 2004	252
13.4	Achievements of Students in England in GCSE and Equivalent Examinations, by Ethnicity and Gender, 2004	253
13.5	Achievements of Students in England in Key Stage 2 National Curriculum Assessments, by Free School Meals and Gender, 2004	254
13.6	Achievements of Students in England in GCSE and Equivalent Examinations, by Free School Meals and Gender, 2004	254
14.1	School-level Differences in Literacy and Numeracy Achievement, by Region: Primary and Secondary Schools in NSW, 2004	276

14.2	Destinations of Year 12 Completers, by Region: Victoria and Queensland, 2005 (%)	278
14.3	Participation in VET, by Remoteness and Type of VET: 15-24 year-olds, Australia, 2004	279
14.4	Educational Attainment by Remoteness: Population 15 Years and Over, 2001 (%)	280
14.5	Characteristics of Schools in New South Wales, by Region: 2004	281
15.1	Gender Differences in Enrolments: Percentage of Girls in Senior Secondary Schools, Yunnan	312

## LIST OF FIGURES

2.1	2nd Grade Language Battery and English Track Grade 8 - Black Students	31
2.2	2nd Grade Language Battery and English Track Grade 8 - White Students	31
2.3	6 <sup>th</sup> Grade Language Battery and English Track Grade 12 - Black Students	32
2.4	6 <sup>th</sup> Grade Language Battery and English Track Grade 12 - White Students	32
3.1	Post-school destinations of high school graduates by socio-economic status, Victoria 2005	41
3.2	The academic and social hierarchy of the upper secondary curriculum, Victoria 2000	44
3.3	Chemistry participation, honours grades and fail grades by socio-economic status, Victoria 2000 (%)	47
3.4	The academic and social hierarchy of schools in Victoria, 2000	49
3.5	Chemistry performance of private schools by enrolment size and socio-economic status, Victoria 2000	51
3.6	Chemistry performance of public schools by enrolment size and socio-economic status, Victoria 2000	52
3.7	Enrolling in university by general achievement band and social profile of each achievement band	53
3.8	Applying for a tertiary place by socio-economic status and general achievement (%)	54
3.9	The academic and social hierarchy of tertiary institutions in Victoria, 2005	55
3.10	Social profile of higher education courses by academic intake standard	56
3.11	Relative shares of private and public school students in the top ten per cent of university courses (%)	57
5.1	Return on qualifications (in euros), 2002	95
9.1	Proportion of a Cohort Quitting the School System in Italy by Region and Age	159
9.2	Indicators of Success of Tertiary Instruction, by Region (2001-2002 academic year)	163
9.3	Median Scores in the Three Areas of Study by Type of School—North-West Italy	166
9.4	Median Scores in the Three Areas of Study by Type of School—North-East Italy	167
9.5	Median Scores in the Three Areas of Study by Type of School—Central Italy	167
9.6	Median Scores in the Three Areas of Study by Type of School—South East Italy	168
9.7	Median Scores in the Three Areas of Study, by Type of School—South West Italy and Islands	168

12.1	Chosen Study Profiles in Research Sample according to Educational Level and Sex	234
12.2	Gender Gaps for Three Fields of Achievement related to Country's General Maths Rank (from weakest to strongest performance)	237
12.3	Gender Gaps for Three Fields of Achievement according to Integration/Differentiation of Country's Educational System	239
13.1	Achievements in end of Key Stage 2 National Curriculum Assessments 1996-2005	244
13.2	Achievements in end of Key Stage 2 National Curriculum Assessments in English, 1996-2005, by Gender	245
13.3	Per cent Entry of Boys and Girls achieving 5(+)*-C grades at GCSE or equivalent, 1996-2004	246
13.4	GCSE and Equivalent Results of Students at the End of Key Stage 4, 2004-05, by Government Region	249
13.5	Percentage of Pupils Achieving Five or more A*-C GCSE Grades or their Equivalent (school A, North East England)	259
13.6	Percentage of Pupils Achieving Five or more A*-C GCSE Grades or their Equivalent (school B, inner Manchester)	259
14.1	Year 7-12 Retention Rates for students in Government Schools, by Region: New South Wales, 2004 (%)	274
14.2	Concentrations of Indigenous Students, by Region: Government Schools, New South Wales, 2004 (%)	280
14.3	Teacher Turnover Rates Measured by the Number of New Teachers as a Percentage of all Teachers, by Region: Disadvantaged Schools in New South Wales, 2004	283
14.4	National Rates of Participation in VET in Schools, by Region: Year 11 in 2000 and Year 12 in 2001	288
15.1	Illiteracy Rate and Primary School Completion in Yunnan: 1964, 1982, 1990 and 2000 (%)	296
15.2	Primary School Participation and Completion Rates: Yunnan	299
15.3	Junior Secondary School Participation and Completion Rates: Yunnan	300
15.4	Senior Secondary School Participation and Completion Rates: Yunnan	302
15.5	Flows of Students Through Exit and Progression Points: Yunnan, 2004	303
15.6	Distribution of Schools, by Region: Yunnan, 2004 (%)	305
15.7	Distribution of Teachers, by Region: Yunnan, 2004 (%)	305
15.8	Qualifications of Teachers, by Level of Schooling: Yunnan, 2004 (%)	307
15.9	Teachers with University Qualifications, by Region and Level of Schooling: Yunnan, 2004 (%)	307
15.10	Computing and Library Book Resources in Senior Secondary Schools, by Region: Students per PC and Library Books per Student	310
15.11	Per Capita Funding Allocated for Teaching Equipment and Instructional Materials (Yuan)	310
15.12	Average Per Capita Value of Total Fixed Assets (Yuan)	311



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## LIST OF ABBREVIATIONS AND ACRONYMS

ARR	apparent retention rate
CDEP	Community Development Employment Programs
CEDEAO	Communauté Economique des Etats de l’Afrique de l’Ouest
DfES	Department for Education and Skills
EAL	English as an additional language
ECLAC	Economic Commission for Latin America and the Caribbean
EDGDP	public education spending as share of GDP
EEO	<i>Equality of Educational Opportunity</i> (the Coleman Report)
ESRC	Economic and Social Research Council
FSM	Free School Meals
GCE	General Certificate of Education
GCSE	General Certificate of Secondary Education
HEFCE	Higher Education Council Funding for England
HESA	Higher Education Statistics Agency
HSB	High School and Beyond survey
IADB	Inter-American Development Bank
IDA	International Development Association
IIEP	International Institute for Educational Planning
IMF	International Monetary Fund
IRT	Item Response Theory
MCEETYA	Ministerial Council on Education, Employment and Youth Affairs
MICS	Multiple Index Cluster Surveys
NAEP	National Assessment of Educational Progress
NEET	<i>Not being in Education, Employment or Training</i>
NCER	National Center for Education Statistics
NCLB	No Child left Behind
NELS	National Education Longitudinal Study
NLS	National Literacy Strategy
NLSY	National Longitudinal Survey of Youth
OECD	Organisation for Economic Co-operation and Development
OFSTED	Office for Standards in Education
OREALC	UNESCO Regional Office for Latin America and the Caribbean
PCI	per capita income
PEIR	Primer Estudio Internacional Comparativo
PISA	Program for International Student Assessment
PREAL	Programa de Promoción de la Reforma Educativa en América

PROGRESA	Programa de Educación, Salud y Alimentación
RAND	RAND Corporation
SEI	Duncan <i>Socioeconomic Index for Occupations</i>
SES	socio-economic status
SLE	School Life Expectancy
TAFE	Technical and Further Education
TIMSS	Third International Mathematics and Science Study
UN	United Nations
UNDP	United Nations Development Program
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNICEF	United Nations Children's Fund
VET	vocational education and training
WHO	World Health Organisation

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### *Permissions*

To ensure contemporary coverage of a number of countries in this international comparative study, we have reproduced two papers which have recently appeared in monograph or journal form. Permission from Elsevier Publishing is gratefully acknowledged for reproducing “The effects of generalised school choice on achievement and stratification: Evidence from Chile’s voucher program”, *Journal of Public Economics*, v. 90, Issues 8-9, September 2006, pp. 1477-1503, by Chang-Tai Hsieh and Miguel Urquiola, and from the Department for International Development (DFID) for reprinting a condensed version of a chapter by Sangeeta Kamat from *Education and Development for a Global Era: Strategies for ‘Successful Globalisation’*, Edited by Angela Little and Andy Green, DfID Publications, London, UK (expected publication December 2006). (The views expressed in this chapter are entirely those of the author and do not necessarily represent DFID’s own policies or views). We also gratefully acknowledge permission from Blackwell Publishing to reproduce an edited version of the critical review essay, originally published in the *British Journal of Educational Studies* (vol. 54, no. 3, September 2006, pp. 308-328) by Martin Thrupp and Ruth Lupton, “Taking school contexts more seriously: the social justice challenge”.

### *Translators*

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## FOREWORD

The studies presented in this volume examine a range of different national settings from the perspective of two broad questions: how do inequalities arise and in what ways do inequalities change? Asking these questions about the whole of an education system — as Duru-Bellat does in the case of France — enables key structures and processes to be identified across different stages of schooling, reaching back to the preschool years and forward to higher education. If social inequality is cumulative over these different stages, when do gaps in achievement begin and what are the most critical phases during which gaps widen and are consolidated? The value of this research lies partly in exposing a field to policy intervention and helping to set priorities and to target efforts to where they are most needed.

But a comprehensive review of how inequality works in a particular country also captures the dynamism in how inequalities evolve. Education is a major site of social as well as political conflict, and even the most tradition-bound institutions and practices are exposed to the diffuse action of social forces. The exposure of an institution to these forces is so much greater when the field of action has become critical for determining life-chances and for the assertion of relative social advantage. Duru-Bellat highlights the junior high school system in France — a distinct phase of four years during which social inequalities are greatly expanded and consolidated. Mickelson, in her study, focuses on track placement in the American high school. It is as if, in both countries, a particular stage of schooling has been chosen to be the site at which social conflict is organised to a high (and decisive) degree. In some countries, such as Norway, the pressure of competing social claims on education appears to be delayed to higher levels of schooling, while in others, such as Spain, conflict is experienced earlier and more sharply, as high rates of failure in compulsory school only too painfully declare.

The country case-studies in this volume all capture change as well as stability in how inequalities operate. Ball and Vincent describe the variable perceptions and preferences of English middle-class families in their choice of childcare facilities in London. This focus shows that strategies of social differentiation are themselves complex and differentiated (by no means simply exclusivist) and reflect the evolving relative positions of different fractions within a dominant class. Smolentseva's study of higher education in post-Soviet Russia is an illuminating account of the de-positioning and re-positioning of families in a context of sharp institutional change. How does market-driven change affect the relative value of family economic, cultural and social capital? What strategies does it impose, which families are most able to exploit the emerging environment, and which formerly-advantaged families are set at a disadvantage from which recovery seems unlikely?

Stability and change might be the themes of the chapters in this volume devoted to gender issues. Stability is manifested in how the academic field of mathematics and the physical sciences has continued to resist social and policy pressures to greater gender equity, profiting from the social forces which erode girls' interest in the field and their academic self-esteem (see the study by van Langen and Dekkers). Stability is also evident in the intensification of disadvantage for both working-class



girls and working-class boys in depressed urban areas. Education policies continue to display an insensitivity to these joint dimensions of disadvantage — which pose the greater challenge of structural inequality — while being displaced or diverted into programs that target boys as a collectively disadvantaged category (see Warrington and Younger's study).

But change, too, is evident in the higher levels of participation and, on some measures at least, higher relative achievement of girls recorded over the last decades of the twentieth century. And if the attempt to declare boys to be the 'new disadvantaged' has failed — sunk by the improbable claim that too many mothers are women — what survives has been a greater appreciation of factors of class and ethnicity in the under-achievement of both boys and girls.

The final chapters in this volume deal with another major dimension of social inequality — rural and urban geography. If the theme of the Australian study is a continual aggravation of the rural-urban divide — with ever-growing cities exhausting the resources of increasingly depopulated country regions — the Yunnan study examines a region in which most of the population is tied to the land, but in a system in which the benefits of rapid economic growth flow to the cities and to the elites who dominate the economy of the cities.

# 1 Social Inequality in French Education Extent and Complexity of the Issues\*

*Marie Duru-Bellat*

## INTRODUCTION

Educational inequality is a matter of acute concern in France as it is in most democratic countries. We rely on schools to assess the skill levels of all students and on this basis to guide them into employment in a way which is impartial and independent of their social origins. However, since the end of the 1960s, French sociology has very cogently denounced sharp and persistent inequalities both in access to different levels of education and in academic success understood more narrowly. This critique took the form of a general theory, presented by Bourdieu and Passeron in 1970 in *Reproduction*, which made social inequalities a necessary outcome of the way in which school systems worked.

The reproduction thesis proved to be very influential, not only amongst sociologists, but much more broadly, and it contributed to nourishing a kind of fatalism thanks to its argument that the very function of school was to reproduce and to legitimate social inequality. But the reproduction critique has also stimulated an ongoing flood of research aimed at giving it empirical support. Today the sociology of education is one of the most dynamic fields of social research in France. It has highlighted the magnitude of inequality occurring in education as well as identifying the processes that underlie this and questioning earlier theoretical work from the perspective of more recent data.<sup>1</sup> Given the unprecedented expansion of education over the last thirty years, we would be unlikely to view the reproductive role of school in the same way as in the seventies.

In this chapter, we will firstly consider what we know about social inequalities in France today, distinguishing between individual and contextual factors, and then turn to the theoretical and policy issues that emerge from the growth in our empirical knowledge.

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\* Translated from the French by Richard Teese.

<sup>1</sup> So much more important because running parallel to this ongoing interest in social inequalities in school has been the implementation at an official level of an entire framework for gathering information on progress at school, involving in particular periodic longitudinal surveys led by the statistical service of the Ministry of Education. For publications by this service, see Notes d'information (various issues) at [www.education.gouv.fr/stateval](http://www.education.gouv.fr/stateval).

## GENESIS AND COMPLEXITY OF SOCIAL INEQUALITIES IN FRANCE

Just how we conceptualise social inequalities matters a great deal. For different measures sometimes lead to quite different images. Currently the most common approach is to compare rates of access or levels of achievement by social origin. Gaps between 1 and 2 standard deviations separate social extremes on indicators of this kind and deliver a powerful message — social inequalities are massive. Nevertheless, other measures offer a more qualified view. Multivariate models give us precise estimates of the variance in test scores or access rates explained by social origin, after taking into account a range of other associated factors (the impact of which is compounded in the raw estimates). Thus, ‘all other things equal’ — with account taken of these other factors — social origin is currently thought to explain about 20% of the variance in end-of-year scores, whatever level of primary school, but also in the first years of secondary school. This is by no means a small proportion, but one which gives rather more hope of reducing social inequality.

*Inequalities at the outset of school career which accumulate in primary school*

From the point of entry to primary school, the cognitive and linguistic growth of a child is marked by inequalities. These make a very early appearance. Psychologists have shown that from about the age of six months, there is evidence of systematic links between growth and ‘quality’ of a child’s environment as measured by a range of indicators of stimulus (such as the quantity and the nature of verbal stimuli). These links between growth and family setting are reflected in the somewhat weaker correlations with father’s occupation as a global indicator of context quality (Reuchlin and Bacher 1989).

It is hardly surprising, then, if we again find social (and also gender) inequalities in the early years of preschool amongst 4-5 year-olds. The gap between children whose fathers are in upper- or middle-level professions and those whose fathers are unskilled manual workers is of the order of 1.2 standard deviations (Leroy-Audouin 1993).<sup>2</sup>

We can point to quite marked inequalities between French-born and foreign-born children, with a gap of 1.4 standard deviations in verbal achievement and 1 standard deviation in other domains (tests of spatial and graphical ability are scarcely less discriminating than language tests). Gender differences tend to be weaker in verbal abilities: girls have an advantage over boys of 0.43 of a standard deviation, with a smaller margin in other cognitive tests. However, it remains the case that all these factors explain not much more than a third of achievement variation in 4-5 year-olds, a result which rules out any conclusion of massive determinism.

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<sup>2</sup> A difference of 1 standard deviation means that about 85% of manual workers’ children achieve at a lower level than the average for the children of managers, while if the two groups were at an equal level of achievement, this figure would be 50%. However, it remains true that the distribution curves of achievement for the two groups display considerable overlap, and thus that the majority of children in one group have scores comparable to those of the other group.

Attending preschool more or less early is equally important. In France preschool enrolls children from below 6 years (which is the starting age for compulsory school), and attendance is now very widely established — 99.6 per cent of infants attend from about 3 years of age, and some 34.7 per cent of infants aged 2 attend. Today the children of farmers (*agriculteurs*) and those of teachers start pre-school at 2 years of age somewhat more often than other groups. This is not insignificant because attending pre-school is associated with greater progress in primary school. Thus, amongst a panel of children beginning primary school in 1997 (in a longitudinal survey conducted by the Ministry of Education), 91 per cent of those who attended preschool from 2 years of age reached the third year of primary school without repeating a grade compared to 88 per cent of those who had begun pre-school at 3, and only 77 per cent of those who had started still later (Caillé 2001). But the gain of starting at 2 years of age instead of 3 years is modest (the disadvantage in starting much later at around 4 or 5 is very much more marked); the benefit of an early start increases both amongst children from socially advantaged families and also those from manual working-class homes, particularly the children of immigrant families.

Only policies aimed at these working-class strata could make early enrolment in pre-school an instrument for reducing social inequalities, where today this tends to reinforce the position of more advantaged groups, such as the children of teachers.

The early experience of pre-school is critical because, starting from the first year of primary school, children's learning proceeds cumulatively: the best predictor of achievement in one year is achievement at the end of the preceding year. From the beginning of the first year of primary school, the advantage of children from better-off families is particularly strong in those skill areas on which successful mastery of reading is based (e.g., recognition of letters), or in mastery of concepts relating to time, no doubt because it is these skills that are targeted by parents themselves. Moreover, the disadvantage experienced by immigrant children is especially pronounced in domains like oral comprehension and mastery of space/time concepts, areas which relate to how well a child learns French.

These inequalities will exert a determinative influence over attainment levels at the end of the first year of primary school. Multivariate analysis of test scores shows that nearly half the variation in children's achievement at the end of the first year is explained by the level of achievement at the beginning (Mingat 1984, 1991). As prior achievement is linked to family socioeconomic characteristics, the latter are 're-translated' into academic attributes. While the influence of social origin on progress at school is relatively limited at any given year level of schooling, its impact is incorporated in the achievement standard reached by a child, and this in turn forms the basis for progression to the next year level. In other words, social inequalities which are established during one year level will have an enduring effect through the intermediary of the achievement profile realised by the time the next year level is attempted.

The accumulation of social advantage through progressive translation into academic profile occurs throughout the five years of primary school in France. An explanatory model can thus be constructed, using as the outcome measure the relative chances of completing primary school 'on time' (not repeating a grade)

(Vallet and Caille 1996).<sup>3</sup> Completing 'on time' can be considered a kind of summary of this phase of schooling, though it is certainly a minimal measure of 'quality' of schooling, for while only 25 per cent of primary school pupils repeat a grade, there exists a very wide range of achievement amongst the 75 per cent who finish 'on time'.

In this explanatory model which enables us to observe the successive translation of social into academic inequalities from early childhood, social gaps are large and significant. Other things equal, just having a senior manager for a father<sup>4</sup> instead of a manual worker adds 10.5 per cent to the chance of completing primary school 'on time', and again just having a mother who holds at least the baccalaureat (instead of a lower level vocational qualification) improves chances by 11.5 per cent. Completing primary school without repeating a grade occurs significantly less often amongst boys, amongst children from larger families (3 children or more), and again amongst children from single-parent families (for whom the impact is less marked).

In contrast to these findings, no significant handicap is found amongst foreign-born children as compared to other children *from the same social level*. Thus, if 54.3 per cent of immigrant children taken as a group do not repeat a grade in primary school as against 76.3 per cent of other children, this difference is entirely a 'structural effect', that is, the result of a range of social handicaps which are cumulative in nature and which have to be taken into account in estimating chances, for example occupation of parents, educational level of parents, size of family, etc. Similarly just speaking a language other than French at home has in itself no discriminating effect. Only those children who have spent at least three school years out of France encounter real difficulties, other things held constant.

In sum it would appear that the initial advantages enjoyed by children from socially privileged households from their entry to preschool are not weakened over the whole course of primary schooling, while on the other hand the relative handicap of immigrant children tends to be somewhat reduced. Social gaps do not widen markedly across preschool and primary school, but rather these eight years of schooling fail to reduce the gaps. A logic of cumulative deficit is thus well and truly in force.

### *Inequalities in achievement and in curriculum placement in secondary education*

There is a striking divergence in achievement levels on entry to junior high school. On both mathematics and French tests held at the beginning of the year, the strongest 10 per cent of pupils score about 3 times better than the weakest 10 per cent. Social background is again linked to these disparities, though is still far from entirely explaining them. It is the initial level of attainment registered at the point of entry to junior high school that weighs very heavily on subsequent growth.

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3 Despite a lot of research showing that grade repeating has little positive effect, this practice remains widely established in France, with as many as 1 child in 2 repeating at least once during his or her school career.

4 Under the heading of 'senior manager', we have grouped the professions with the highest qualification levels health professionals, engineers, business managers, teachers, in brief, all those jobs which in general require a university degree of at least three years' duration.

Statistical modelling of progress through the first year of junior secondary education shows that while 33 per cent of differences in mean end-of-year performance in French and in mathematics is accounted for just by individual characteristics — a bigger impact than at lower levels of schooling, indicating a strengthening of the effects of factors like social origin — 67 per cent of the end-of-year result is explained by score at the start of the year. This reflects a deepening influence of prior achievement. Some 70 per cent of test score differences are explained by prior achievement and individual characteristics taken together (reflecting the interactions between them).

Significantly, the strongest students at the start of the first two years of junior secondary education also make more progress than the weakest students. Junior high school is thus in a sense elitist. To the extent that working-class pupils begin junior high school from a weaker cognitive level, the elitism of the institution is revealed in a widening of social inequalities, quite apart from any new forms of social inequality linked specifically to this phase of schooling. It can be demonstrated that over the first two years of the program, junior high school ‘produces’ more inequality in results than is contributed by the whole of a child’s preceding school career (Duru-Bellat and Mingat 1993).

Why do inequalities accelerate in junior secondary education? We can hypothesise about the operation of a number of aspects of the teaching environment in this phase of schooling. For example, the content of programs remains largely traditional (if with some significant changes), having been inherited from a time when only a select group of children reached secondary school. But inequalities do not arise simply from a conservative program of studies being imposed on pupils. Both pupils and their parents are not content just to accept what is ‘offered’ to them. To the extent that school programs give scope for differentiation — and this is far more the case than in primary education — families develop strategies to extract benefits from advantageous opportunities, ranging from the choice of subject options, to guidance and placement decisions, up to the choice of the establishment itself.

Since 1975 the curriculum of junior high school has in theory been the same for all pupils.<sup>5</sup> But choice comes in at the very beginning in respect of a first foreign language, and then two years later with other subject options. These choices turn out to be socially differentiated. Latin is an example. This language is taken by 56 per cent of the children of teachers compared to only 15 per cent of the children of unskilled manual workers. No doubt the latinists (or at least their parents) are sincerely drawn to the study of ancient languages, but this attraction in fact reflects the academic and social composition of the classrooms (or of the schools) in which they enrol. And this, it should be said, is with the complicity of their teachers. For classes of a common academic level are formed on the basis of choice of options. If it transpires that student progress is better in ‘good classes’ or in certain schools — a

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<sup>5</sup> The Haby reform, passed by parliament in 1975, suppressed all streaming during the four years of junior high school, so that the latter became the “common junior high school” (*collège unique*); programs were identical for all students, ability streaming was forbidden, and pupils were supposed to attend their local school.

point to which we will return in part two of our discussion — then the choice of options which follows from these more or less overt strategies contributes to the production of social inequalities.

Research into strategies of ‘distinction’ extends to choice of program orientation which a pupil must make at the end of junior secondary education.<sup>6</sup> Streams or tracks which proceed from the end of this phase constitute a third mechanism which, in addition to social inequalities in progression and in choice of subjects, adds to the growth of inequalities. If track placement plays an essential role here, this is because in France every effort is made to make placement decisions which conform to parental wishes. However, what parents want varies according to economic and cultural level. A belief in the value of qualifications and demand for them is very much greater when parents themselves are well-educated or at least come from a socially advantaged background.

Demand for track placement is marked by differential self-selection according to social origin. The basis for self-selection is in the first place academic. When a child is achieving well, parents are uniformly ambitious. When a child is struggling, ambitions are on the contrary limited. But where children are more average, there is a wide diversity of aspirations, influenced by age (with more modest hopes for older children) and above all social background. To illustrate, in the case of weaker learners — those with marks less than 9/20 in the leaving exams at the end of junior high school — as many as 66 per cent of the families of managers seek to have their children placed in the baccalaureat stream compared to only 18 per cent of the families of manual workers. Turning to pupils with average marks — in the range 9-13 — these gaps are not so great, though still large. The range is from 94 per cent (families of managers) to 67 per cent (families of manual workers). It is thus amongst weaker to average pupils that social differences in the severity of self-selection are most marked, and this category of pupil represents a large proportion of the total cohort. As to high achievers — those who score in the range 13/20 or above — it should be stressed that parental demand for baccalaureat studies is uniformly high (around 96 per cent), whatever the social background.

Faced with demands for stream placement which are very socially stereotyped, the school guidance councils (*conseils de classe*) which bring together teachers and principals make decisions in an essentially reactive manner (Roux and Davaillon 2001). They stick to contesting ‘unrealistic’ choices and do not try to ‘raise the aspirations’ of young people from working-class backgrounds who are prudent in their plans. This mode of operation thus tends to entrench socially differentiated aspirations, to seal up the social inequalities which are embedded in them.

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6 A pupil can enter the second or long cycle of secondary education leading to the baccalaureat, or a short-cycle program of vocational education and training undertaken over two years and providing skilled training for office workers or manual workers. The short-cycle vocational programs can also lead to a further two years of study for the award of the vocational baccalaureat. Pupils can ask to repeat the final year of junior high school, which is generally done to avoid being streamed into a vocational track.

By contrast, school guidance council decisions tend to advantage young people from immigrant backgrounds, whose course aspirations are more ambitious than those of their French-born peers of similar socioeconomic status (Vallet and Caille 1996). Immigrant students from socially comparable backgrounds are more likely to be offered a place in the baccalaureat stream.

On the gender front, the course placement process does not advantage girls over boys, once achievement level is taken into account. If girls have better school careers (e.g., proportionately greater access to the baccalaureat stream), this is due to higher levels of academic success, though they are also protected by the reluctance of parents to see their girls placed in vocational programs (Roux and Davaillon 2001).

All the factors which influence progress through junior high school are fairly well known, so it is research which estimates their relative impact that offers the most interest. Thus, using longitudinal panel data from across the 1980s (Duru-Bellat, Jarousse and Mingat 1993), it has been possible to model the origins of unequal access to baccalaureat programs to identify the key predictive factors. Differential access involves large gaps. While the children of managers have an 87 per cent chance of acceding to baccalaureat studies, this is true of only 32 per cent of manual workers' children.

Now somewhat dated, these indicators of the social gap in undertaking academic studies in senior high school do at any rate reflect orders of magnitude which are of great importance. Decomposition of the 55 point gap in baccalaureat access reveals that about 10 points have already accumulated before entry to primary school, and a further 10 points are added during primary school. The 35 points which are subsequently added over the four years of junior high school provide conclusive evidence of an acceleration in the formation of social inequalities during secondary education. Taking these 35 points, social gaps in academic achievement contribute slightly more than inequalities in course placement decisions (19 and 16 points respectively).

If, then, the heavy impact of junior high school is confirmed by these findings, it remains true that the social inequalities which accumulate year after year across the whole of a child's school career (from preschool to secondary school) are more important than the role of course placement at the end of junior high school. Nevertheless, inequalities in placement are far from being a secondary effect. They tell us that starting from junior high school, then reaching up through senior high school, the pathways of students and the successive differentiation of these pathways through streams and options cannot be regarded simply as a reflection of more or less successful academic learning.

#### *Family strategies and accumulated academic capital in senior high school and in higher education*

In France in the last twenty years there has been quite an exceptional expansion in participation in upper secondary education. From 1980 to 1990 and then to 2000, the number of young people reaching baccalaureat levels (all streams included) rose from 26 per cent of the age group to 43 per cent and finally to 69 per cent (at which



participation has since stabilised). In this context, gaining the baccalaureat has become much less rare and therefore also less unequal. But opening up the baccalaureat has been accompanied at the same time by a diversification within upper secondary education. To promote greater democratic access, technological and then vocational baccalaureats have been introduced. The result has been that the general and older academic streams - arts, economics, science - now represent no more than about half of the graduating cohort. Given these developments, research into social inequalities in initial access to baccalaureat-level studies has to be extended to include analyses of relative access to different strands and options within senior high school programs, even though we can expect less social discrimination through what are higher levels of *academic* differentiation.

Right from the outset, access to senior high school (*lycée*) is marred by social disparities. Looking back to the panel of children who began junior high school in 1989, as many as 90 per cent of those from managers' or teachers' homes entered the three-year baccalaureat program compared to only 42 per cent of manual workers' children. The gender gap was less marked, but nevertheless considerable - 65 per cent of girls compared to 52 per cent of boys. It is not surprising, therefore, that while fully 75 per cent of the children of teachers will gain the general (academic) baccalaureat, the kind of baccalaureat necessary to access the most prestigious tracks in tertiary education, this will be achieved by only 16 per cent of the children of the least qualified manual workers.

The working-class nature of the vocational baccalaureat - accessed from the short cycle vocational programs which run parallel to the main academic track - also needs to be stressed. Manual workers' children contributed 37.9 per cent of total entrants to this stream (with a further 11 per cent coming from the ranks of the unemployed or inactive). By contrast, these two groups made up only 21.2 per cent and 5.7 per cent respectively of the academic or technological strands of the baccalaureat.

When they begin their baccalaureat, students face a choice of options, and here again we find that the choices they make express a logic of social distinction. For example, Latin is most often chosen by academically stronger students and also by young people from the socially most advantaged families. This, notably, is a choice which sets up access to 'same ability' classes, as schools generally group students according to the subject options they choose.

A number of studies have shown that significantly better progression occurs amongst students who choose Latin (e.g., Duru-Bellat, Jarousse and Solaux 1997). This choice involves a gain of nearly half a standard deviation in performance, which is quite large. Doubtless this is because Latin classes bring together the best pupils - but also the best teachers. Teachers are conscious that the students who benefit from this practice of options-based ability streaming usually come from higher socioeconomic status homes. This reinforces the advantage of being placed in a higher academic stream on entry to senior high school, which itself remains the best predictor of attainment at the end of the first year of the baccalaureat.

Progression within the first year is influenced by social background only to a limited extent. As can be predicted from this advanced stage of schooling, academic factors have largely taken the relay of social factors, so that working-class students

of the same prior level of achievement and taking the same options make only slightly less progress than students from managers' or teachers' homes.

When they reach the end of their first year of the baccalaureat program, young people have to choose a specialisation, and it is this which largely determines the direction they take in higher education as well as their career horizons. Academic success is determinate, and the best students would seem fated to be placed in the S (*Science*) stream. However, for an equivalent level of achievement, there are marked social biases. All other things equal, the children of higher managers and professionals will enter the S stream more frequently (some 40 per cent compared to only 4 per cent of children from the poorest educated families). This specific bias in stream placement adds to the higher level of achievement experienced by the most advantaged social group by the end of the first year of senior high school.

Why lycée students from upper socioeconomic status backgrounds should enter the elite academic stream more frequently reflects both their own and their parents' aspirations. Students from the socially most advantaged backgrounds - especially boys - gravitate very strongly to the science stream, which is seen as demanding, but also opens up the widest range of options. By contrast, young people from social backgrounds that are the greatest cultural distance from school are more likely to hesitate, notwithstanding comparable results. They act more prudently and more amenably to the advice of their teachers, who are often even more cautious, if not negative.

In sum, what appears decisive during senior high school are family aspirations and the extent to which these hold firm in the face of institutional factors, such as teacher behaviour and school guidance councils. Strategic action grows in importance. Of course, the underlying level of academic achievement continues to exert its influence, and the cumulative impact of achievement is to produce a very solid pattern of inequality which is reinforced by strategic choices of options and higher aspirations.

Reaching higher education, social demand proves still more powerful, and self-selection (both academic and social) operates very widely. In theory, any student with a baccalaureat can enter most streams of higher education in France. Selection — based on student profile — only occurs in the advanced technical programs (two-year or short-cycle courses) and in the academic post-baccalaureat classes of the lycées which prepare students for the competitive entry examinations of the higher professional schools (*grandes écoles*).

The elite academic institutions are seen by young people from socially advantaged backgrounds as jewels. Armed with a science baccalaureat achieved without any grade repeating (which in France means at least a distinction), more than half of all the male children of senior managers and professionals (but only 30.5 per cent of the female children) head into the preparatory classes for the *grandes écoles* as compared to only 21 per cent of the sons of manual workers and merely 9 per cent of the daughters. Further down the institutional scale, the universities — other than the clinical Faculties — receive young people from more modest backgrounds, which is also the case with the advanced technical courses.

Higher education in France is marked by very sharp differences in social intakes. Thus, while the offspring of senior managers and professionals represent only about

15 per cent of the population aged 15-24 years, they make up respectively 33 per cent of students in general university programs and 14 per cent of students in advanced technical courses, but as many as 52 per cent of students in the preparatory classes of the *grandes écoles*. Just looking at the most prestigious institutions in this elite sector, *Polytechnique*, *Ecole Nationale d'Administration*, the *Hautes Etudes Commerciales* and the *Ecoles Normales Supérieures*, their representation reaches extremely high levels, as much as 81 per cent (Euriat and Thélot 1995).

At the pinnacle of academic excellence, these social patterns illustrate the steady accumulation of advantage from the very beginning of schooling and the play of judicious choices exploiting and extending on this rising platform of achievement. Behind the strategic behaviours, the search for the most attractive professional outcomes dominates the thinking of the most able young people. But at the same time there is also a desire to become part of the institutional worlds which are the hardest to enter, the most closed, locked up by severity of selection, and to sit side by side with other young people of similar ability in a project of mutual distinction and socialisation.

Turning to how well young people succeed once they do reach higher education, it has to be stressed that there are no longer any clear social gradients in achievement — other than in a number of law and humanities streams — once prior levels of attainment are taken into account. At the end of a process in which survival rates vary from one group to another, “inequality in selection tends progressively to reduce and sometimes even to neutralise the effects of inequality in the face of further selection” (Bourdieu and Passeron 1970). But the very way in which higher education courses are organised requires young people to ‘know how to manage’ their educational careers in an increasingly complex environment. It is the orientation of a student in the broadest sense — including redirection in the case of failure, choice of the locus of study, etc — which becomes the dominant factor during this stage. It is also the most plausible explanation of social differences in outcomes. Inequalities during higher education also arise in part from discouragement or on the other hand perseverance and single-mindedness, driven more by a socially conditioned conviction of self-efficacy than by intellectual endowment.

Several key conclusions flow from this analysis of patterns of achievement at different levels of education. Firstly, social inequalities between children are already evident on entry to pre-school classes. School fails to counteract these. On the contrary, social differences in achievement accumulate little by little over the primary years and are more marked on entry to junior secondary education. Social influences are progressively transmuted or ‘incorporated’ into relative academic level. They augment a more or less severe degree of selection over the different phases of schooling (over-selection or under-selection as the case may be), which begins on entry to senior high school and intensifies in higher education, with social origin ceasing to be specifically linked to academic success. At this stage, differentiation between streams creates ‘micro settings’ that are relatively homogeneous in socioeconomic terms. Social inequalities are now played out more ‘between streams’ than ‘within streams’. Social origin thus becomes more important — because associated with increasingly sharper cleavages of institutional location or

setting — even though progress within higher education courses appears to be increasingly meritocratic (a mask which helps legitimate underlying inequalities).

The channels through which social background exerts its influence are thus multiple. At an individual level, there is already enough difference between children on entry to primary school to ensure that they will profit from this phase of schooling to different degrees. No more is needed to widen these initial gaps than that small differences accumulate in achievement level, giving rise to a kind of deep inertia. Equally each point at which choices have to be made provides an opportunity for family strategies to widen the gaps due to differential achievement.

Can we blame school for this largely social game? Doubtless it cannot be held responsible for inequalities in choices which arise mainly from social structure (parents of unequal socioeconomic status place their children in sites of unequal academic value). But that said, it is how school is organised which allows these choices to acquire more or less weight and which provides the framework through which children are directed into different streams or programs of unequal effectiveness and value.

School is more directly and clearly responsible for inequalities in achievement. This is the more so because the achievement gap tends to grow rather than decline over the successive stages of education. However, the ways in which school contributes to creating social inequalities in achievement and in school career are best examined from the perspective of the very different contexts in which schools work. It is to this that we now turn.

#### SCHOOL CONTEXT AS A VECTOR OF SOCIAL INEQUALITY

The French education system likes to be regarded as unique and by the same token just. All pupils are offered identical program content and classroom conditions, and this is uniformly vaunted as the very mark of equality. Up to quite recently this formally equitable provision was underpinned by highly centralised powers (with changes only occurring from the beginning of the eighties) and by resistance to the very idea of positive discrimination. Within the shadow of this system, sociologists like Bourdieu developed global theories which described an implacable system, independent of context and time. They tended to neglect how the education system actually operated in different geographical settings. It would be twenty years later before researchers would seek to explore the relative importance of contextual mechanisms in the formation of social inequalities in student outcomes.

Today we know: (1) that context does ‘make a difference’ — that is, students make more or less progress, depending on the characteristics of the setting (teachers, other pupils); (2) that the most well-informed consumers both know and typically search out the best conditions for their children’s progress. Social inequalities thus flow specifically from access to school settings which are of very uneven quality.

#### *Teachers and schools: differentially effective and equitable*

That French schools differ in terms of how well children succeed and the streams or sections of the curriculum in which children are placed has been known for many

years. But these ‘between school’ effects have frequently been reduced to broad differences in ‘climate’ or social ‘tone’ (intake), reflecting residential segregation and an official policy of school zoning.<sup>7</sup> On this assumption, a school ‘inherits’ populations endowed with characteristics more or less favourable to success. Academic results are simply an expression of these initial inequalities. There is thus no specific effect of school setting, only compositional effects communicated directly from the environment.

However, it has now been well documented that beyond the effects of aggregate composition, there are distinct school setting effects. An example is how local populations of students are unequally selected either between different schools serving the same geographical area or within different classes in the same school, and the impact of relative selectivity on student outcomes.

Since the 1980s, French researchers have demonstrated school effects in how pupils are placed in different streams or courses — pupils who are otherwise comparable in academic and social terms. A finding of particular importance relates to the impact of school setting on relative outcomes for working-class students. Thus a young person from a blue-collar background enrolled in a junior high school with a socially advantaged intake develops higher aspirations than in a school with a more working-class make-up. Social composition reacts on the prevailing level of aspirations in a school, and this in turn affects the stream placements to which students are oriented (Duru-Bellat and Mingat 1988; Duru-Bellat et al. 2004).

Moreover, just as there are differences in the curriculum placement process, academic performance also varies according to school. Achievement differences are not spectacular, but they are far from negligible. For the progress of primary school children in a given year is influenced as much by school attended as social origin (and on some measures more so), even though looking at the whole of a child’s school career, social background builds up its impact systematically (remembering that a child can change school, but generally not the setting of the home). Within secondary education, it has been estimated that school effects explain about 5% of the variation in mathematics attainment in the final year of junior high school (Grisay 1997), while with French the impact is somewhat less.

School effects, it should be noted, are more pronounced amongst weaker learners (twice as great as with average students), while conversely school impacts least of all on high achievers.

In English-speaking countries, the ‘school effectiveness’ movement has produced a mass of research, the findings of which converge on a set of pedagogical factors associated with high performance: the key role of leadership, high expectations which challenge students, a focus on basic skills, a climate of security and good discipline, and frequent assessment of student progress. For France, the key role of the school principal is not so clear (Grisay 1997). What matters most is an environment characterised by ‘openness to learning’. This involves the best

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<sup>7</sup> Social profiles of schools can vary very considerably. Just looking at junior high schools, the 10% of the socially most advantaged establishments enrol only half as many lower working-class children as are found in the population as a whole (22% compared to 44%), while the 10% of establishments which are most working-class enrol over a third more such students than are found in the population (over 68%).

possible use of school time (not wasted on discipline issues) and minimal absenteeism. High expectations on the part of teachers are equally important, and therefore also a strong emphasis on the value of schoolwork. Good relationships between students and teachers, and more broadly in school life, clarity of rules and a friendly environment all contribute to raising achievement levels.

But student progress hinges more on what happens in class than what school a child attends. Thus in the early years of primary school, classroom effects explain around 14% of the variation in student achievement (somewhat more in mathematics than in French) as against the 5% we noted for school effects. Very similar estimates apply to what happens in junior high school, except that classroom effects are even more important than school effects at this level of schooling (cf. Duru-Bellat and Mingat 1988). Parallel results have been reported from research on the senior high school years (Felouzis 1997). Again, classroom effects, like school effects, are more pronounced for the weakest students.

If both school effects and classroom effects are somewhat less marked in France than in neighbouring countries, differential effectiveness does contribute in important ways to the formation of social inequalities between students. For one of the factors most strongly correlated with inequalities in achievement (always bearing in mind that these factors are relatively similar at both school and classroom levels) is the social composition of the student body. High performing schools are more often, on average, establishments which enrol students from socially advantaged backgrounds. Looking at individuals, greater progress is made when students attend a school whose intake is socially advantaged (noting that this specific effect of social mix remains fairly small) (Duru-Bellat and Mingat 1988; Grisay 1997; Duru-Bellat *et al.* 2004).

Similarly within classrooms, the mix of pupils also matters, both in achievement terms ('academic mix') and in socioeconomic terms ('social mix'). How school principals put together the classes in a school thus counts. This allocation process can take the form of ability streaming. Though ability streaming is officially banned in junior high school in France, recent research has shown that it continues (Duru-Bellat and Mingat 1997). Now the creation of academically hierarchical classes which are at the same time socially filtered has an impact on the progress of junior high school students. More progress is made when students are taught in classes of high average ability. It is also the case that improvement is much better when there is greater diversity in the classroom (though this effect is weaker than the impact of high average ability). Finally, and of special note, studying in a heterogeneous class has different effects, depending on prior level of achievement: the weakest pupils gain, while by contrast the strongest tend to lose. But what low achievers gain is roughly twice as important as what high achievers lose. The weakest learners are able to improve by up to half a standard deviation in marks according to whether they attend a class of high average mix or weak average mix, while high achievers will experience a fall of at most one quarter of a standard deviation.

On this evidence it is vital that we grasp the relationship which exists both at the level of the classroom and at the level of the school between social composition and improvement in student learning. A first clue lies in the unequal quality of teaching resources and school programs available to students. Too little is known of

geographical inequalities in teacher provision in France or of resource differences more broadly understood. There is nothing to prove that today the quantity of resources is systematically more limited in working-class areas — if only because to a certain extent positive discrimination has operated since the 1980s. But this policy in itself does not correct for unevenness in the resources *which are most effective*. Thus class sizes are in fact smaller in educational priority zones — nearly two pupils less per class — but this has little influence over student learning. Working against this is the tendency for the least experienced teachers to be concentrated in these zones (where it is also often the case that average achievement is low), and this *is* a factor associated on average with lower effectiveness.

Program provision often reinforces inequalities. Thus in most working-class areas, programs which operate as streams of early relegation (such as for students with learning difficulties) are more widely established, and the trend is for students from poorer backgrounds to fill these classes which exclude them from academic studies. By contrast, the preparatory classes for the *grandes écoles* are more often established in senior high schools attended by young people from socially advantaged backgrounds. Geographical context thus operates to constrain or expand the opportunities available, and social inequalities rest in part on this.

But if ‘context’ (school attended) has something of the status of a given over which pupils themselves have no control, in another respect it is something ‘fabricated’ — formed by the aggregation of pupils whose social and academic attributes contribute to creating environments of unequal quality. The site that a school represents covers a range of influential factors — the friends attending the school, the resources that they embody, the climate that is formed in schools and classrooms, the teaching approaches that work in the setting or are too difficult to apply.

### *Social dynamics which widen gaps*

We know that at both classroom and school level, teaching varies in both amount and quality according to the academic attainment and the social background of pupils. For teachers adjust their practice to the assumed standard of their pupils. In some circumstances, pedagogical adjustment takes the form not only of differences in the means and materials available for students to attain learning objectives, but a modification in the objectives themselves. More modest goals are set for weaker students. In socially advantaged schools, where the culture and behavioural norms of pupils more closely conform to school expectations, teachers can raise the level of their demands and cover programs more fully. As an example of variability in teacher judgement of how much can be asked of pupils, nearly three out of every four teachers in the most working-class establishments consider that programs in the second year of primary school are unrealistic, while this is true of only about a third of teachers in the most socially advantaged schools (Duru-Bellat *et al.* 2004). Similarly in working-class junior high schools (Meuret 1995), the extent of program demands made on students is lower, coverage less complete, and discipline more problematic. Just on this last point, observation of classroom practice in

disadvantaged schools shows that the tasks of behaviour management use up the valuable time needed for teaching (van Zanten 2000).

Besides classroom-adaptive behaviours, teachers form expectations which are inevitably stereotyped, resulting particularly in a systematic under-estimation of the academic level of working-class students. It thus turns out that on two parameters fundamental to effectiveness — management of content and time, on the one hand, and expectations on the other — the prevailing teaching practice in working-class settings is more often unfavourable to student success.

More generally, the whole way in which teachers' work is influenced by the immediate context in which they exercise their craft: how they see students as a group, their strengths and weaknesses, their interests, all give rise to a whole outlook (van Zanten 2000). Adjusting to students is, of course, understandable and indeed necessary. But it can have perverse effects. Doing their best to offer programs adapted to the individual needs and cultural diversity of students sometimes only tends to reinforce the initial inequalities which these represent.

Finally, the real curriculum as operating in schools — as delivered, within what circumstances will allow — represents a truly two-way process of interactions and mutual reactions. It is the outcome of a negotiation between pupils such as they are — with all the adjustments that intake imposes on teachers — and on the other hand what school is ready to make available to them within the limits of what the whole situation will allow. A portion of school effectiveness is thus what students 'will bear'. This largely depends on the nature of the school mix. For this sets limits of possibility around those practices of teaching that are the proximate, if not true vectors of effectiveness.

What passes from day to day between pupils offers a second clue, at least as important for understanding why a largely working class student body should represent an environment less propitious to school achievement. Here there are many factors at work. To start with, it should be remembered that where teachers have high aspirations, these are perceived as such by students and are not without an impact. A positive expectation is a stimulus, while an expectation of failure can actually produce failure (following the logic of the 'self-fulfilling prophecy' reported in an abundance of studies — for a synthesis see Brophy and Good 1986). For their part, pupils are equally active in developing their own group norms, and some studies suggest that in working-class settings some level of indiscipline is considered normal (Duru-Bellat *et al.* 2004).

Going beyond the question of group behavioural norms, a key part of the effect of school mix lies in the interactions between pupils ('peer effects'). These interactions have a more or less positive influence on achievement, depending on differences in the cultural resources of individuals. Thus pupils from working-class backgrounds, when brought into daily contact with peers who have cultural advantages, may not only be deterred from anti-school behaviours, but also grow in cognitive terms from this contact (Thrupp 1999).

In sum, the contrastive environments formed by schools serving advantaged or disadvantaged communities (or, again, classrooms of a given ability level) should be viewed as settings both of learning and of socialisation, settings where social intake



is a key ingredient, thanks to the psychosocial dynamics played out within them as between teachers and students and amongst students themselves.

Context hardens inequality. The socially most advantaged pupils benefit systematically from the most effective pedagogical settings, or the least selective in relative terms, and contribute moreover to making these environments still more effective and less selective just by bringing these pupils together at these sites and from the positive adjustments to their presence made by teachers.

If children from more privileged backgrounds are the most likely to benefit from better instructional conditions, it is nevertheless difficult to dissociate the advantages they owe to their social milieu from those they get from their school setting. The influence of social background on achievement and on school career is to an important extent indirect, communicated through access to a school context of unequal quality (not simply, or not uniquely, through individual factors relating to cultural heritage). But we should not forget that school context is itself socially constructed through family strategies, and these prove to be essential in how school and instructional context become differentiated.

#### *Families with unequal resources faced with unequal opportunities*

Families closest to school in social and cultural terms are also aware of inequalities in the range of learning opportunities as well as in the wider quality of school life which schools offer to their children. Should it turn out that the junior high schools frequented in the main by better-off groups are also more effective, less selective, and more calm and stable environments, it represents a rational orientation on their part to prefer these schools (to which they also have relatively greater access).

A number of studies have been undertaken into the reasons which parents give for their choice of school (summarised in Duru-Bellat 2001). These studies show that while parents often refer to the academic standard of a school, the predominance of academic motives is far from being complete. Parents also take into account the climate of the school, the quality of the teachers, and the overall well-being of the child. However, that said, the lack of objective information on these aspects means that in practice school quality is read from pupil quality, including also social and sometimes ethnic characteristics. Choosing an effective school thus comes down to choosing those children with whom your child will attend school.

Where school zoning applies, with schools recruiting from a defined geography, choice of where to live enables some families to locate themselves close to more sought-after establishments, with the result that just the option itself of choosing residential location contributes to social inequalities. School zone entrenches residential inequalities. Since 1983 there has been an easing of zone rules in France. Admittedly the exemptions sought by parents represent a fairly modest proportion of total enrolments, for less than 1 in 10 pupils in the first year of junior high school are attending 'out of zone', and this has been stable over many years (*Note d'information*, no. 01.42). But this low figure conceals major disparities between rural areas (where exemptions represent only 5 per cent of enrolments) and major urban centres (where exemptions are often greater than 10 per cent and sometimes as high as 20 per cent in some zones). To this must be added the number of parents

opting for the private sector, which represents around 20 per cent of all pupils. Above all, the parents who do choose — either a public or a private establishment — distinguish themselves by the social backgrounds from which they are drawn. Private schools are chosen especially by the private professions, though use of the private sector in France does not in itself produce a relative advantage in school career (cf. Tavan 2004) while it is particularly teachers and public service managers who exercise choice within the public system. In sum, parents from this range of backgrounds would seem very conscious of the stakes involved in gaining access to what particular schools have on offer, including notably who attends a school.

Family strategies can also be seen at work *within* schools. This is not only a matter of the most well-informed parents being willing to intervene directly, but reactively in what happens at school. When such parents are unable to leave their residential area, but see problems in what is on offer or what is happening, they will implement strategies of ‘colonisation’ (van Zanten 2001) to create ‘reserved places’ or contexts for their children. These strategies include choice of subject options, but also direct approaches to the school principal to assign a child to a particular class or indeed to create particular program options whose sole function is to group children together to ‘protect’ them from exposure to others.

Thus parents — at least those whose children are achieving well, parents who also exercise the most influence at school — assert an interest in having their children placed in a ‘good’ class (since progression is greater when average academic level is higher) and in having the school establish ability-streamed classes. While these family strategies reflect the private interests of parents with good students and appear entirely reasonable from an individual perspective, in fact they diverge from what would appear to be the general interest. For from an overall perspective, taking into account the academic level of the whole of an age-cohort, it is mixed classes which turn out to be the most ‘productive’, as they maximise the progress of the weakest students, without on the other hand producing a proportionate reduction in the progress of the strongest. But parents of weaker students, parents who have everything to gain from mixed classes, are for their part much less influential in school affairs. Thus divergent interests are asserted at school: parents struggle, unequally armed, to appropriate the best quality resources and to have their children placed ahead of their competitors in better streams or in better options and in the end, therefore, in better social positions.

Summing up, school settings, social mix and the educational resources that go with these are experienced by families largely as a function of geographical location (which is never socially neutral). We can well understand why parents who quite ‘normally’ seek to master the conditions of everyday life should also try to offer their children the most supportive and the most productive school setting, since the stakes of academic success are high. Families are thus active participants (even if unequal participants) in the creation and the preservation of the ‘conditions of context’ which are most favourable to them.

## CONCLUSION

The various mechanisms which produce social inequalities in school careers — the cumulative nature of initial inequalities, differential self-selection at key turning points, and divergent conditions of school quality — are relatively stable in their action. However, with growth in overall levels of schooling, social inequalities tend more and more to be manifested later in the major stages of education (Duru-Bellat and Kieffer 2000; Merle 2002). Some levels of the education system are today reached by practically all children (e.g., completion of junior high school) and can be viewed as democratised in the sense of universal formal access, while inequalities emerge beyond these (such as entry to senior high school) and are evident in more qualitative terms (choice of baccalaureat stream and program or course within higher education). The process of democratisation is thus accompanied by a series of forward movements in which unequally positioned families compete to place their children as effectively as possible in sites of unequal value within the education system.

Hardly astonishing, then, that the extent of democratisation that has occurred has had very little impact on the phenomena of social reproduction. True, the lack of social mobility is today somewhat less pronounced than at the beginning of the twentieth-century, and the development of mass compulsory schooling has been significant. But this limited evolution in relative life chances does not compare with the scale of changes in education (Vallet 1999). In other words, there has been a greater reduction in educational relativities than in broader social relativities. More recent developments have thus tended to confirm the theoretical predictions of Boudon (1973) that the evolution of inequalities in life chances for different social groups is not necessarily ‘in phase’ with how educational inequalities have evolved.

Whatever their personal attributes, the fact is that individuals insert themselves in a society whose ‘places’ are predefined, and if education is a relatively effective way of accessing the best positions, the definition of these places themselves (and more broadly how society is stratified and the extent or level of inequality) does not fundamentally arise from its action. Structural constraints intervene, such as the ratio of degree holders to the available number of ‘places’ in the economic system. Recent changes in these parameters have highlighted this key question. If, as has been observed in France over the last twenty years (Forsé 2001), the expansion of the social structure at its high end has been slower than the rate of production of graduates to fill this level, there will be an adjustment which is paid for in the form of devalued credentials.

Education’s role in how social inequalities are generated is thus framed by structural factors. No doubt this leads to a somewhat attenuated view of what can be expected (as with Bourdieu’s theory of reproduction), or at least the need to rethink profoundly what we should expect.

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## 2 First- and Second-Generation School Segregation and the Maintenance of Educational Inequality

*Roslyn Arlin Mickelson*

### INTRODUCTION

Public education in most contemporary ethnically and racially plural societies stratifies opportunities to learn by students' social class and ethnic origins. The organisation of public education in racially and/or ethnically plural societies contributes to both the transformation and reproduction of the social order. During the last century, because access to public education has been expanded broadly to previously excluded sectors of society, two competing trends have emerged: greater access to public education supporting the transformation of individuals and society, and the resilience of race, gender, and social class hierarchies as new forms of social and educational privilege emerge to replace older ones. This chapter presents a case study of a local US school district that embodies these twin trends toward greater inclusion of formerly marginalised students at the same time that its structures of race and class privilege are reinvented to accommodate and compensate for the reform policies aimed at greater equity and opportunity.

In the United States, one of the principal school policies designed to enhance educational equity has been school desegregation. Advocates look to school desegregation to enhance educational opportunities in racially stratified school systems. Since 1954 and the renowned *Brown v. Board of Education* case that outlawed formal school segregation, the US has wrestled with questions of race, class, and the organisation of public schooling. From 1954 through the 1990s, federal courts were a primary force in the systematic dismantling of officially segregated school systems. Since the 1990s, many judicial mandates to desegregate have ended, raising important questions about the durability of the social and educational transformations made as a result of desegregation policies. The history and consequences of desegregation in one North Carolina school district — the Charlotte-Mecklenburg Schools (CMS) — offer us the opportunity to assess the contributions of desegregation and segregation to racial differences in student achievement. The history of this local school district also is emblematic of the resilience of systems of white, middle class privilege that characterise most public-schools in the US.

From 1971 to 2002 the Charlotte-Mecklenburg community grappled with the mandate of *Swann v. Charlotte-Mecklenburg* (1971) that required CMS to provide equality of educational opportunities to all children. CMS employed mandatory busing (from roughly 1974 to 1992) or controlled choice among magnet schools (from 1992-2002) to achieve a racial balance among students in every school: approximately 40 per cent black and 60 per cent white and other students (Gaillard, 1988; Smith, 2004). Under this system, almost all students were bussed to schools outside their neighbourhoods for at least some part of their educational careers. As a result, the majority of students in CMS during the past 25 years attended a racially desegregated school at some stage in their education (Mickelson, 2001).

The legal foundation for desegregation in CMS collapsed in spring 2002, when the U.S. Supreme Court declined to review a decision of a lower court that found CMS had fully met its obligations to make good faith efforts to eliminate all vestiges of the racially segregated public school system. Having done all that is practicable to overcome its racially dual past and become a single “unitary” school system (that is, no longer a racially segregated system), CMS was therefore released from further judicial supervision. Even before the U.S. Supreme Court denied the plaintiffs’ petition for a review of the lower court’s decision<sup>1</sup>, CMS designed a new pupil assignment plan that assigned students to their neighbourhood schools (CMS, 2002). Because most neighbourhoods are racially identifiable in Charlotte, assigning students to attend neighbourhood schools in effect permits the school district to re-segregate by race and social class.

These are difficult times for those in Charlotte and across the USA who believe that there are still compelling reasons to require public schools to pursue racial and ethnic integration. Not only are the federal courts declaring other segregated school districts to be unitary,<sup>2</sup> but the interracial coalitions of progressive citizens and their allies among corporate and civic elites that once supported desegregation also appear to be disintegrating (Mickelson and Ray, 1994; Welner, 2001). In the face of claims that desegregation does little to improve minority students’ educational outcomes while it inflicts heavy burdens on the children and communities it is intended to serve (Armor, 1995; Armor, Rossell and Walberg, 2003; Cook, 1984; Morris and Morris, 2002; Shujaa, 1996), a number of African Americans, Latinos, and other former supporters of desegregation now embrace neighbourhood schools or vouchers as attractive alternatives that may provide greater educational opportunity to minority students (Breed, 2002; Chambers, 2000; Flake, 1999; Fuller, 2000).

Most overt educational discrimination — separate schools for blacks and whites, racist curricula and teachers — has been eliminated (Gamoran, 2001; Armor, Rossell and Walberg, 2003). Nevertheless, discrimination in education survives and

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<sup>1</sup> See *Belk v. Charlotte-Mecklenburg Board of Education* (2002) at 152. In *Capacchione v. Charlotte-Mecklenburg Schools* (2002) at 152, the Supreme Court also denied the white plaintiffs’ certiorari petition regarding the issue of their attorneys’ fees.

<sup>2</sup> See *Board of Education of Oklahoma City v. Dowell* (1991), *Freeman v. Pitts* (1992), and *Chambers* (2000). There is considerable variation in both the social science and legal literature in the usage of terms used to describe the racial composition of districts and schools (See Orfield and Eaton, 1996).

arguably the most harmful manifestation of it today is *de facto* segregation.<sup>3</sup> When segregation occurs at the school level it is considered first generation segregation. Classroom level segregation, known as second generation segregation, takes the form of ability grouping or tracking (streaming). Most American schools organise secondary school instruction by tracks.<sup>4</sup> Blacks, Latinos, and Native Americans are found disproportionately in lower tracks where curricula and instructional practices are weaker (Hallinan 1998; Kelly 2003; Lucas 1999; Lucas and Berends 2002; Mickelson, 2001a; Oakes 1985; Oakes, Muir, and Joseph 2000; Welner 2001). Not only are blacks and other ethnic minorities (other than Asians) more likely than whites to be assigned to lower tracks, but research indicates that blacks and whites with similar ability learn in different tracks, especially in racially desegregated school systems (Eitle, 2002) or systems where blacks are a numerical minority (Kelly, 2003). The relative absence of black students in higher-level courses and their disproportionate enrolment in lower-level ones is an underemphasised component of the race gap in achievement.<sup>5</sup>

In this chapter I report findings from a 15-year-long investigation of desegregation, segregation and academic achievement in the Charlotte-Mecklenburg Schools, a county-wide public school district located in the south east of the United States. I provide empirical data that show both black and white students gain academically from learning in desegregated schools and classrooms. The inverse is also true: all students suffer academically in segregated learning environments. Although CMS achieved renown for its efforts to implement court-ordered desegregation from roughly 1971 to 2002, many of the district's practices and policies actually worked to subvert the Swann decision's mandate to provide all students with equitable opportunities to learn. Most notable amongst these practices were student assignment policies that allowed the growing resegregation beginning in the mid-1980s and the practice of tracking academic courses in secondary schools. Even in the desegregated schools, students' core academic courses in math, science, social studies, and English were commonly organised in ways that tended to enrol blacks into the lower level courses and whites into the higher, college-

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3 In 1966, the Coleman Report (Equality of Educational Opportunity) demonstrated that blacks attending desegregated schools achieved more than their counterparts in segregated schools. Recent empirical research offers further evidence of the harm of segregation, not only for minorities, but for whites as well (See Bankston and Caldas, 1996; Brown, 1999; Kelly, 2003; Grissmer, Kirby, Berends and Williamson, 1994; Mickelson, 2001a and 2001b). In their independent reviews of the empirical literature on diversity effects on learning, Hawley (2002) and Hallinan (1998) conclude that students who learn in schools that have students from different races and ethnicities are likely to gain an education superior to that of students who do not have this opportunity.

4 Research on the effects of tracking is extensive and, with few exceptions (c.f. Kulik, and Kulik, (1982, 1987)) suggests the harmful effects of the practice. See Kornhaber (1997); Lucas (1999); Lucas and Berends (2002); Oakes (1985); Oakes, Muir, and Joseph (2000); Wheelock (1992).

5 Even some of the harshest critics of race-sensitive remedies to educational inequality acknowledge existence of racially correlated tracking and its contribution to the race gap in educational outcomes (see Armor, Rossell, and Walberg, 2003).



preparatory ones. In this way, resegregation by tracking within schools undermined the potential benefits of school-level desegregation. The case study illustrates that even if schools reorganise to offer major improvements in educational equity (in this case, mandatory school desegregation) at the same time, new forms of educational privilege can emerge to replace the older ones, thereby undermining the potential equity benefits of the reform. I conclude by considering the implications of the CMS case for the prospects for equality of educational opportunity in the present era.

#### HOW THE CMS RESEARCH STUDY WAS CONDUCTED

At the time the data used in this study were collected in the spring of 1997, approximately 100,000 CMS students attended the school district's 11 high schools, 24 middle schools, and 80 elementary schools. 52 per cent of the students were white, 41 per cent were African American, and the remaining 7 per cent of the student body was Asian, Latino and other ethnic groups. The county-wide school district covers 531 square miles. An urban core is surrounded by growing affluent suburbs that are devouring the once largely rural landscape.

#### *Sample*

My team of researchers collected survey data from every middle school and high school in CMS. Within these schools all academic courses in English, science, social studies, and mathematics are invariably taught in tracks ranging from Regular (the lowest level for nonspecial education students), Advanced, Gifted (also known as Honors), to Advanced Placement and International Baccalaureate (the most rigorous track). At every school, at least one class from each of the various English track levels was included in a 50 per cent stratified random sample of classes. All students in each selected class were surveyed. On average, 90 per cent of the students enrolled in the selected classes took part in the survey.

Of the 1,833 CMS high school students who completed surveys, 611 (33.3 per cent) were black, 1,119 (61.1 per cent) were white and 103 (5.6 per cent) were Asian, Hispanic, or Native American. A total of 2,730 middle school students completed the survey: 1,014 (37.1 per cent) were black, 1,538 (56.3 per cent) were white, and 178 (6.5 per cent) were Asian, Hispanic, or Native American. Because of the small number of Hispanic, Asian, and Native American respondents, I analysed only data from black and white students.<sup>6</sup> Since 1997, I have continued to collect CMS documents and aggregate school system data available from the district's website or from the North Carolina Department of Public Instruction.

I supplemented the survey and aggregate school system data with in-depth interviews with educators, parents and civic leaders. Additionally, I use CMS

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<sup>6</sup> I did not collect survey data from students in special educational English classes. The disproportionate number of black students in special education classes and special programs causes the proportion of black students in the non-special education classes to be less than the district's 1997 overall percentage black. The samples therefore, are biased toward underestimating the effects of segregated schooling on black children's achievement.

documents and reports, expert witness reports from the 1999 desegregation trial<sup>7</sup>, and a set of phone interviews with CMS secondary principals, senior administrators, and current and former school board members I conducted between December 1998 and May 1999. These interviews were designed to elicit information about the formal and informal policies and practices associated with race, desegregation and the allocation of students to specific courses in CMS schools.<sup>8</sup>

### *Survey Data*

The middle school and high school surveys were almost identical. The primary difference is that the high school version included questions about respondents' school-to-work educational experiences. The survey instruments ascertained students' demographic characteristics (age, race, and gender), their family background (mothers' and fathers' educational and occupational attainment), attitudes toward education and the future, educational and occupational aspirations, work and leisure activities, and their self-reported effort. CMS also provided multiple measures of achievement and the history of prior schools attended by each student. CMS records provided indicators of school-level variables such as the proportion of teachers with full licensure and with advanced degrees.

### *Analyses*

The analyses of the survey data proceeded in several steps. First, because students attended different schools, I explored the possible relationship between students' outcomes and the characteristics of schools that they attended. I used multilevel modelling to estimate individual students' achievement as a function both of school-level factors and of characteristics of students themselves.<sup>9</sup> I separately analysed the middle school and high school samples. Second, I examined the racial compositions of English, Social Studies, Math, and Science classes by track in CMS middle and high schools. This procedure permitted me to assess whether resegregation by track within schools was taking place.

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7 *Belk v. Charlotte-Mecklenburg Schools* (1999); *Capacchione v. Charlotte-Mecklenburg Schools* (1999).

8 See Mickelson (1998).

9 See Kreft and Leeuw(1998) and Rabe-Hesketh and Everitt (1999).

## FINDINGS

*Effects of School Racial Composition on Achievement**Effects of Segregation*

The results of the data analyses indicate that students who learned in segregated schools had lower scores on North Carolina standardised tests than their predicted scores had they attended integrated schools.<sup>10</sup> While the findings confirm that many factors most people expect to affect achievement in fact do so (higher socioeconomic status, access to private art, music or dance lessons, academically-oriented peer group, positive attitudes toward education and greater effort have a positive influence) the results also show that attending segregated schools has negative effects on students' achievement.

Table 2.1 presents the results of the statistical analyses for 1997 CMS students' North Carolina middle school End-of-Grade (EOG) and North Carolina high school End-of-Course (EOC) standardised test scores. Reading top left to right, the first column identifies the student, family, and school compositional factors I investigated. The middle column gives results for middle school students and the column on the right gives results for high school students.<sup>11</sup> The middle school results show that effort, prior achievement, positive educational attitudes, being female, and being white are associated with higher test scores. Receiving private art, music or dance lessons, and higher family socioeconomic status also positively affect test scores. Higher tracks (which are disproportionately white) have a positive effect on EOG Reading scores, while attending segregated minority middle and elementary schools has negative effects on test scores.

The high school results indicate that effort, family socioeconomic status, and private art lessons do not significantly affect EOC test scores but prior achievement, positive educational attitudes, being in a college-bound track, and having academically oriented peers exert positive influences on scores. Holding other factors constant, male and white students achieve higher test scores than female or

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<sup>10</sup> For purposes of this study, to ascertain if a school is racially segregated, I follow the standards used by the CMS Board of Education while it operated under the Swann orders. I use a  $\pm 15\%$  bandwidth around the school's percentage of black students. Any school with a student population less than 15% black, I considered racially isolated. For my analyses of within-school segregation of secondary school academic courses, I draw upon the  $\pm 15\%$  bandwidth standard and consider a classroom to be racially isolated black if the black proportion of students in it exceeds the school's black proportion of the students by 15%, a classroom with a black proportion of the population less than 15% below the school's black as racially isolated white; and I consider all other classrooms to be racially balanced. At the time that I conducted this research, very few secondary students were neither black nor white.

<sup>11</sup> The numbers with asterisks indicate the factors my research found to significantly affect test scores; numbers with multiple asterisks are more highly significant.

black students.<sup>12</sup> However, there are no significant influences on test scores from magnet school attendance, the per cent gifted students in the respondents' school, or abstract educational attitudes.

At the time the students who participated in this survey attended CMS elementary schools in the early 1980s when the district was about two-thirds white, even the more racially isolated minority elementary schools often had many white students (up to 45 per cent white). After controlling for the numerous individual and family background factors discussed above, the statistical analyses indicate that the more time that students (both blacks and whites) spend in segregated black elementary schools, the lower are their Grade 8 End of Grade (EOG) reading scores and Grade 12 End of Course scores. Holding constant the same individual and family background factors, the larger the percentage of black students in a middle school, the lower are all its students' EOG reading scores.

*Table 2.1: Influence of Various Factors on CMS Middle and High School Students' Standardised Test Scores, 1996–1997.*

<i>Factors</i>	Middle school $\beta$	High school $\beta$
<b>Student Factors</b>		
<i>Race (African American)</i>	-2.347 ***	-5.331 **
<i>Gender (Female)</i>	.778 **	-9.780 ***
<i>More Effort</i>	.716 ***	2.053
<i>Higher Prior Achievement</i>	.104 ***	.428 **
<i>Positive Concrete Attitudes</i>	.937 ***	3.253 *
<i>Abstract Attitudes</i>	.105	-2.258
<i>Academic-oriented Peer Group</i>	--	31.881 **
<b>Family Factors</b>		
<i>Family Background (Higher SES)</i>	.722 ***	.760
<i>Private Art Lessons (Yes)</i>	.553 *	2.342
<b>School Factors</b>		
<i>Greater % Segregated Elementary Education</i>	-.018 **	-.167 **
<i>Higher % Middle School Black Students</i>	-.054 **	--
<i>College Track (Yes)</i>	2.638 ***	11.682 **
<i>More Gifted Students in School</i>	--	-.282
<i>School is a Magnet (Yes)</i>	.632	2.576
No. of Students	1748	1313
No. of Schools	24	11

Note:

\*  $p < .05$

\*\*  $p < .01$

\*\*\*  $p < .001$

-- variable not in model

<sup>12</sup> Female high school students tend to earn higher grades and attain more education than males but male students continue to earn higher scores on standardised tests like the EOC and SAT (Mickelson, 1989).

*Effects of Desegregation*

The results of the regression analysis also indicate that the more time both black and white students spend in desegregated elementary schools, the higher their standardised test scores are in middle and high school, and the higher their track placements in secondary school. Because track placement contributes substantially to achievement over and above students' family background, effort, and other individual characteristics, the fact that students who had more of their elementary education in desegregated schools tend to have higher track placements is an important academic outcome of desegregation.

EFFECTS OF RACIAL COMPOSITION OF CLASSROOMS ON  
ACHIEVEMENT

Because ability grouping and identification for gifted or special education begin early in students' educational careers (Entwistle, Alexander, and Olson, 1999; Kornhaber, 1997) grouping and labelling practices contribute to secondary school track placement. Since I concentrate on secondary students in this chapter, I will discuss only briefly the roots of tracking in elementary school ability grouping practices. During early elementary school disproportionate numbers of black students, especially males, are placed in special education and disproportionate numbers of whites are identified for gifted education. To illustrate this pattern in the early sorting of students, I refer to findings from two studies.

Mindy Kornhaber's (1997) research on the identification process for gifted and talented education in CMS reveals how certification as academically gifted (AG) is an early source of racially-correlated tracking in the district. Kornhaber reported that throughout the early 1990s, African Americans in CMS were markedly under-referred for AG assessments; consequently, programs for the gifted became and remain largely the domain of white students. According to one CMS central office educator Kornhaber interviewed, gifted education has been used widely as a white track, and the CMS gifted program has been an "elitist, isolated, white-only program" that has only recently begun to change (Kornhaber, 1997, p.105). Kornhaber described how formal AG identification is a high-stakes process, which some parents pursue and cultivate. She quoted one high-level staff member who observed, "Parents want elementary school identification as gifted because it allows entrance into middle school gifted classes" (1997, p.119). Savvy parents know that AG identification in elementary school launches the children onto a trajectory of high-track secondary school courses.

The second illustration comes from Tamela Eitle's (2002) examination of the relationship between special education placement rates among black students and the desegregation status of different school districts. Using a nationally representative data set, she found that in districts under court-ordered desegregation rulings, the proportions of blacks in special education are significantly higher than in otherwise comparable districts. Eitle suggests that higher rates of second-generation segregation through special education placements of black students during elementary school may be a response to desegregation orders.

The patterns of racially correlated sorting of elementary students into special education and gifted programs as described by Eitle and by Kornhaber suggest some of the covert processes countering desegregation efforts in districts such as CMS under court mandates to end segregation. In virtually all CMS secondary schools, core academic classes are tracked. All secondary schools tracks are far more racially homogeneous at the low and high ends of the continuum than the schools themselves. This conclusion arises from my analysis of a CMS document that identifies the course name, track level, and student count by race, period, and teacher's name for every course offered in the system's eleven high schools and 24 middle schools.<sup>13</sup>

This pattern of resegregation by track within secondary schools is illustrated in Table 2.2 with 1997 data from schools representative of racially isolated black, racially balanced, and racially isolated white schools during a time when CMS was lauded as a successfully desegregated school system. Here readers can see the percentage of black students in a given school and in classes by subject and track level. Cochrane Middle School, for example, is 78 per cent black (a racially isolated black school) but its AG math classes enrol no black students. Its special education math class is 86.3 per cent black. The track is, nonetheless, racially balanced because 86.3 per cent is just barely within the  $\pm 15$  per cent range (an increase in 1 per cent of black students in special education would tip the track into the racially imbalanced category). South Charlotte Middle school, with 11 per cent black students, is a segregated white school. Although its regular and EC mathematics classes average more black students than the school, and the gifted classes have fewer, all math classes are racially balanced because they fall within the  $\pm 15$  per cent range around the school's population of 11 per cent black students. But Carmel, a desegregated middle school, displays a pattern that is common throughout CMS secondary schools. The top track has almost no black students while blacks are strikingly over-represented in the lowest, special education track. Only the regular math class is desegregated, and then just barely: if 3 per cent fewer blacks enrolled in regular math, that track, too, would be segregated.

Table 2.2 shows a similar pattern among classes in high school biology. Schools' top track classes are almost always disproportionately white irrespective of the schools' racial composition; special education courses are almost always disproportionately black; and only regular classes are racially balanced. Because track placement is such a powerful influence on academic outcomes, the existence of racially correlated tracks in a desegregating school system seriously reduces the potential of school-level desegregation policies for improving black students' achievement.

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<sup>13</sup> See Charlotte-Mecklenburg Schools (2002). For my analyses of within-school segregation of secondary school academic courses, I draw upon a  $\pm 15\%$  bandwidth standard and consider a classroom to be racially isolated black if the black proportion of students in it exceeds the school's black proportion of the students by 15%, a classroom with a black proportion of the population less than 15% below the school's black as racially isolated white; and I consider all other classrooms to be racially balanced.

*Table 2.2: Typical Racial Composition of CMS Middle School Mathematics and High School Biology Classes by Track and School, 1996–1997.*

	Per cent black in:			
	<i>Entire School</i>	<i>Academically Gifted Class*</i>	<i>Regular Class</i>	<i>Special Education Class</i>
Middle School Mathematics				
<i>South Charlotte</i>	11.0	3.0	20.6	13.2
<i>Carmel</i>	35.3	1.5	23.5	69.0
<i>Cochrane</i>	78.0	0.0	78.1	86.3
High School Biology				
<i>North Mecklenburg</i>	21.6	0.0	36.2	37.4
<i>Myers Park</i>	35.1	1.9	76.0	100.0
<i>Garinger</i>	63.2	0.0	74.8	80.0

\* 8<sup>th</sup> grade Academically Gifted mathematics and AP high school biology

Source R.A. Mickelson, 1998, Exhibit 1A-1H., CMS Class Counts 1996-1997.

One might argue that track placements merely reflect objective decisions to enrol students in classes in keeping with their merit, and that any correlations with race are coincidental or due to racial differences in social class or in ability. In order to test this argument I analyzed track assignments by student race in middle and high schools, holding constant students' prior achievement during their elementary school years. I divided students into deciles based on eighth grade students' scores on their 2<sup>nd</sup> grade California Achievement Test (CAT), and twelfth students' scores on their 8<sup>th</sup> grade CAT. I then compared track placements for blacks and whites within each decile range. If race were not a factor in track placements, within each decile range the proportions of blacks and whites in each track would be similar.

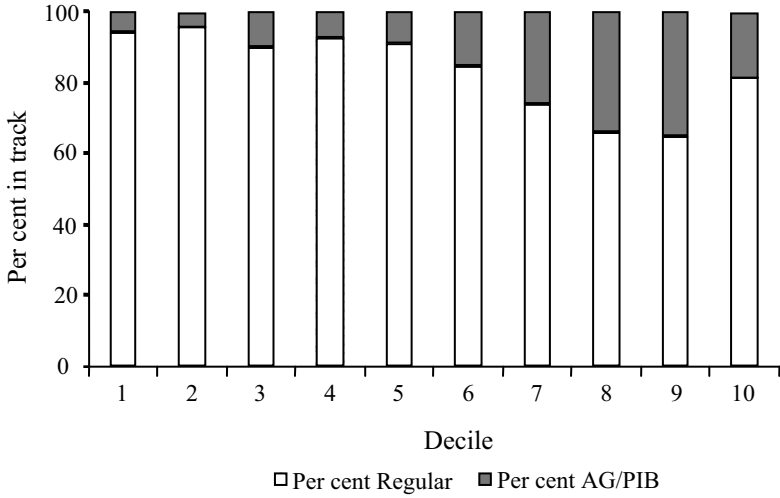


Figure 2.1: 2nd Grade Language Battery and English Track Grade 8 — Black Students

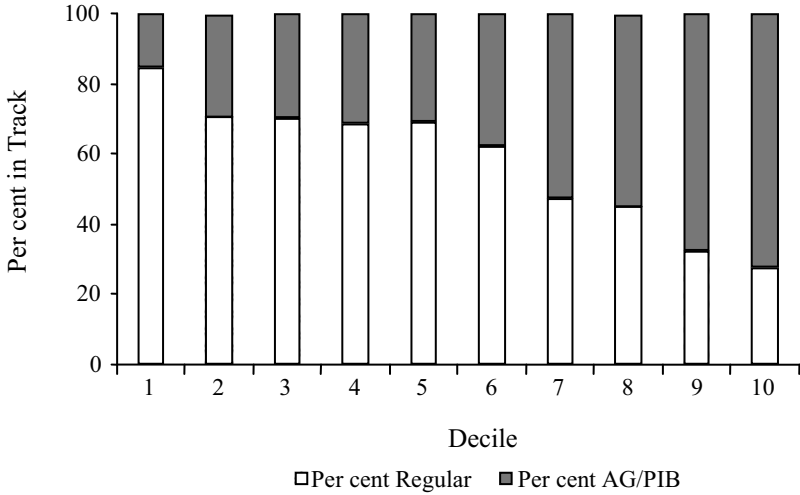


Figure 2.2: 2nd Grade Language Battery and English Track Grade 8 — White Students



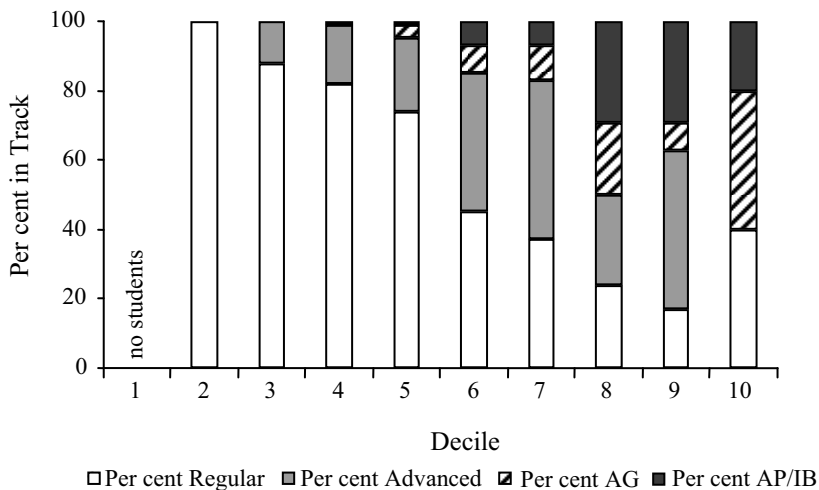


Figure 2.3: 6<sup>th</sup> Grade Language Battery and English Track Grade 12 — Black Students

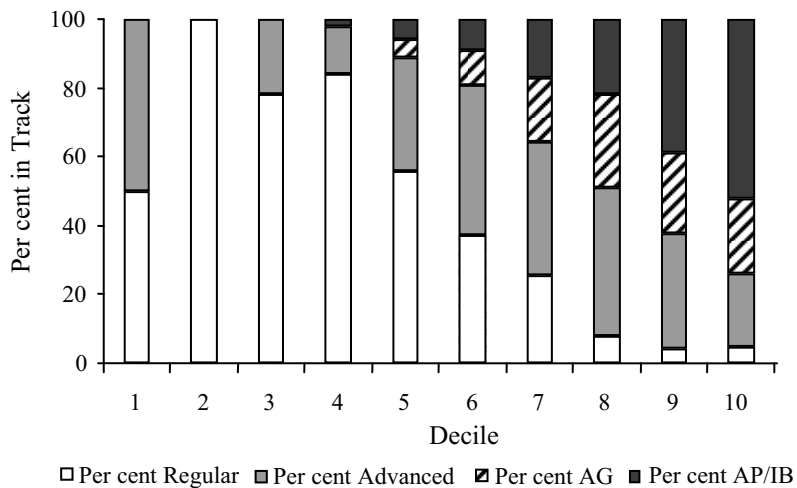


Figure 2.4: 6<sup>th</sup> Grade Language Battery and English Track Grade 12 — White Students

The analyses show that students' track assignments *were* related to their race. The pattern among the most academically able students (those with scores in the highest decile) reflects the overall tendencies found throughout the other decile ranges: irrespective of their prior achievement, blacks are more likely than their comparably able white peers to be in lower tracks. Figure 2.1 presents the per cent of black Grade 8 students in different language arts tracks controlling for their achievement when they were in second grade. Figure 2.2 presents the same for white Grade 8 students. The grey area indicates the top track. Moving left to right, when we compare the increase in per cent of students by decile in the top track in Figures 2.1 and 2.2 we find distinctly different placement patterns for blacks and whites. Whites are more likely than blacks with similar CAT scores to be in the top tracks. For example, among grade 8 students in the top decile (ninetieth to the ninety-ninth percentile), only 27.6% of whites but 81.3 per cent of blacks were enrolled in regular English classes, while 72.3 per cent of whites but only 18.7 per cent of blacks were assigned to the top English track (AG or Pre IB).

Figure 2.3 presents the per cent of black Grade 12 students by English track controlling for their prior achievement. Figure 2.4 presents the same for white Grade 12 students. In these figures, the dark grey area represents the top track. Moving left to right across the deciles as we compare the top tracks in Figures 2.3 and 2.4, we again find distinctly different placement patterns for blacks and whites: whites are more likely than blacks to be in the top tracks although the differences are not as stark among seniors as they are for Grade 8 students. For example, among twelfth grade students whose grade 6 CAT scores were in the top decile (ninetieth to the ninety-ninth percentile), 20 per cent of blacks but 53 per cent of whites were enrolled in the AP/IB English track. Recall, these comparisons are among comparably able students.

These findings using 1997 data indicate that prior achievement alone does not explain the pattern of racially correlated access to top (and bottom) tracks. Clearly, students' racial backgrounds continue to affect their academic course placement in ways that reproduce racial stratification in enrolment, and later, in academic outcomes (recall, track placement is a powerful and significant predictor of test scores).

Four years later, racially correlated patterns of track assignment continued in CMS. In the fall of 2001 several thousand middle-school students, a majority of whom were black, were placed into lower-level mathematics classes even though all had passed or excelled on their previous year's EOG math tests. The superintendent ordered the misplaced students moved into higher-level, reconstituted math classes.

How did this misplacement happen in the first place? Although parents and students participate in course placement decisions, families typically rely on the advice of educators who often powerfully shape students' educational career trajectories. The superintendent explained that a number of decisions led to the misplacement of so many blacks into lower-level math courses, including racial stereotyping: "I think people need to face that there are issues of bias and prejudice that play into this" (Cenzipur, 2001). More importantly, second generation segregation via tracking insulates higher track students, who tend to be middle class and white, from engaging in truly desegregated education.

## CONCLUSION

In this chapter, I presented evidence demonstrating that desegregated schooling benefits the academic outcomes of students who experience it, and segregated schools and classrooms harm those who learn in them. Using 1997 survey data and aggregate school system data from the Charlotte-Mecklenburg Schools I examined the academic consequences of attending segregated and desegregated schools. The findings indicate that:

- Racially segregated schools and racially segregated tracks still exist in CMS a generation after the Supreme Court's order to desegregate the school system and both forms of segregation are harmful to students' academic achievement.
- The greater the number of elementary school years that a student spends in a desegregated elementary school, the higher a student's scores on standardised tests and the higher is track placement in secondary school.
- The greater the number of elementary school years that a student spends in a racially isolated black elementary school, the lower the student's later scores on standardised tests and the lower her or his track placement in secondary school.
- Track placement is influenced not only by prior experience with segregated elementary education, but by a student's race as well: CMS black students are more likely to be found in lower tracks than white students with comparable prior achievement, family backgrounds, and other individual characteristics.
- Irrespective of their race and their own socioeconomic background, CMS students, on average, perform better on North Carolina standardised tests if they attend schools with lower concentrations of poor students.
- Taken together, these findings indicate that first and second generation segregation in CMS has helped to maintain educational inequality during the last 35 years.

Despite significant narrowing in the last quarter century, the black-white gap in achievement that existed in 1954 continues today.<sup>14</sup> The findings from the case

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<sup>14</sup> This pattern of re-segregation by track within CMS is not recent. In 1973, two years after the Swann decision, the administration reported to the CMS school board on the status of desegregation efforts. The report noted, among other problems arising from efforts to implement the court's order, that "'ability-grouping' too frequently is de-facto re-segregation" (See Charlotte-Mecklenburg Schools, Pupil Assignment Plan Study, 14). William Poe, the chair of the school board in 1975, explained to me why the district began "ability grouping" when it began to desegregate. He drew an example from the desegregation of West Charlotte, at that time the flagship high school of the black community. Poe stated that when students from the politically powerful "old money" white Myers Park neighbourhood desegregated West Charlotte, an optional Open Program (a rigorous college prep track) was instituted to encourage whites to participate in desegregation (record of interview with W. Poe, 22 December 1998). As Poe recalled, "[the Open Program] was created as an impetus for whites to enrol their kids in the school. The school board viewed it as a sop to white people." He explained that the creation of this track necessitated the hiring of new chemistry, calculus, and foreign language teachers at West Charlotte. According to Poe, "Whites needed to be assured

study of Charlotte suggest some of the important reasons for the race gap's persistence. For example, in Charlotte, covert resegregation processes worked to recreate white privilege in the school system even as it desegregated. Elsewhere Smith and I argue that, insofar as racially-identifiable grouping and tracking can be considered second-generation segregation, one can make a plausible case that the establishment and maintenance of second-generation segregation in CMS was a political precondition of dismantling school-level first generation segregation (Mickelson and Smith, 1999).

In many ways, CMS's history offers us a strategic case with which to study the relationship of desegregation and segregation to racial equality in educational processes and outcomes. The district's history offers us further insight into the reasons race and class privilege are so robust in the face of decades of policy interventions designed to open up public institutions, like schools, to more equitable organisational structures, policies, and practices. Clearly, equity-minded reforms compete with re-emergent forms of educational privilege for dominance in educational practice.

#### ACKNOWLEDGEMENT

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that their children would get the *same quality of education they had* received at Myers Park High, not just the culinary and cosmetology classes offered to blacks at West Charlotte.”

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## Vertical and Lateral stratification of Opportunity

*Richard Teese*

### INTRODUCTION

The trend to mass secondary education in Australia over the last fifty years has been marked by few pauses. In the 1940s, only 1 in 10 young people reached the end of high school, almost all bound for university. This figure would rise to about 1 in 3 by the mid-1970s and to 3 out of 4 by the end of the century (Teese and Polesel 2003: 3; CDE 1986: 22). There would be a flow-on to higher education, if not proportional, then at least very considerable. By the early 1980s, the 10 per cent who had once reached university had risen to between 1 in 5 and 1 in 4 (Anderson and Vervoorn 1983: 33). Participation in higher education continued to climb in subsequent decades (DEET 1993: 333), with the result that by the mid-1990s over a third of the age-group (36 per cent) could expect to enter higher education directly from school, with a further 9 per cent reaching university as mature-age students (Aungles, Karmel and Wu 2000: 8; James 2002: 5).

Given the changes occurring at the same time in the industry and occupational structure of the Australian economy — requiring more highly qualified workers in an expanding services sector — these trends in educational participation might seem good evidence of the adaptive capacity of a school system (cf. Trow 1977). Moreover the sheer scale of the changes — 75 per cent of a cohort completing school, 45 per cent eventually reaching higher education — invites the conclusion that Australian schools have not only been adaptive, but equitable as well. As employment opportunities have migrated from one sector of the economy to another (in this case, from manufacturing and construction to finance, education and community services), the school system has made room for new populations. It has escorted them into the jobs created by growth industries and has been blind to their social characteristics.

Such a harmonic view of education and the economy has inspired many policy-makers. But it represents a goal rather than an achievement. Comforting as high rates of school completion may be to politicians, they rest in the Australian context not only on the higher aspirations conditioned by industry change, but on a collapsing full-time labour market which effectively traps many young people in

school. Additionally, those who are trapped — reluctant learners for whom there is no full-time work — are not a random sample of the teenage population, and the sites where they are trapped within the school system are not random locations in the hierarchies of schools and curriculum. In short, the mass use of post-compulsory school in Australia does not necessarily represent a positive adjustment to the evolving economic environment or an equitable response to adjustment needs.

If as many as three in four young people now finish school, more discriminating measures of student outcomes suggest that the heavy investment in education by both government and families over a long period of time has only tended to shift upwards the basis on which social inequalities are expressed rather than narrowing them. In other words, inequalities now form on a higher basis. This does not mean that the effort has been wasted. For investment has returned a more highly educated population and, in theory, a more adaptable and productive workforce. But access to the occupational hierarchy remains markedly unequal, income inequality has shown no improvement over many decades, many workers live in poverty, and vulnerability to disease, disability, premature death, and poor ‘social health’ (compulsive gambling, debt, family violence, substance abuse) is greater amongst low socio-economic status communities (Borland, Gregory and Sheehan 2001; Saunders and Taylor 2002; Argy 2003; Baume and Leeder 2003).

Expanding education has not led to a convergence in economic opportunities (as measured by access to jobs) or in measures of physical and social well-being. Viewing equity on these indicators calls into question the meaningfulness of a statistic such as school completion and demands more searching measures both of the quality of student outcomes and educational provision itself in an age of mass school completion. These measures in turn cast doubt, if not on the level of national investment in education, at any rate on its direction — the activities and structures within education that have benefited from sustained growth in public and private spending over decades.

### *Unequal transition outcomes at the end of school*

A snapshot of the education and employment destinations of young people completing school in Australia presents an ambiguous picture. Figure 3.1 looks at the destinations profiles of secondary school graduates grouped into ten bands, according to socio-economic status.<sup>1</sup>

This picture of one moment in time shows a steeply rising gradient in access to university studies. The range is from 34 per cent of graduates from the lowest SES band to 77 per cent from the highest band. Working-class students tend to compensate for their limited access to university by enrolling more frequently in 2-3 year vocational programs in technical and further education (TAFE) institutes. This raises the total level of transition to all forms of tertiary education to 59 per cent in the case of students in the lowest 10th. band of SES. But this still does not eliminate

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<sup>1</sup> Findings are based on a survey of 33, 585 school completers in Victoria, representing a 70.4% sample of the relevant population. For the study on which the data are drawn, see Teese, Nicholas, Polesel and Helme (2006).



the gap between them and students in the highest SES band, 11 per cent of whom also enrol in technician-level vocational programs.

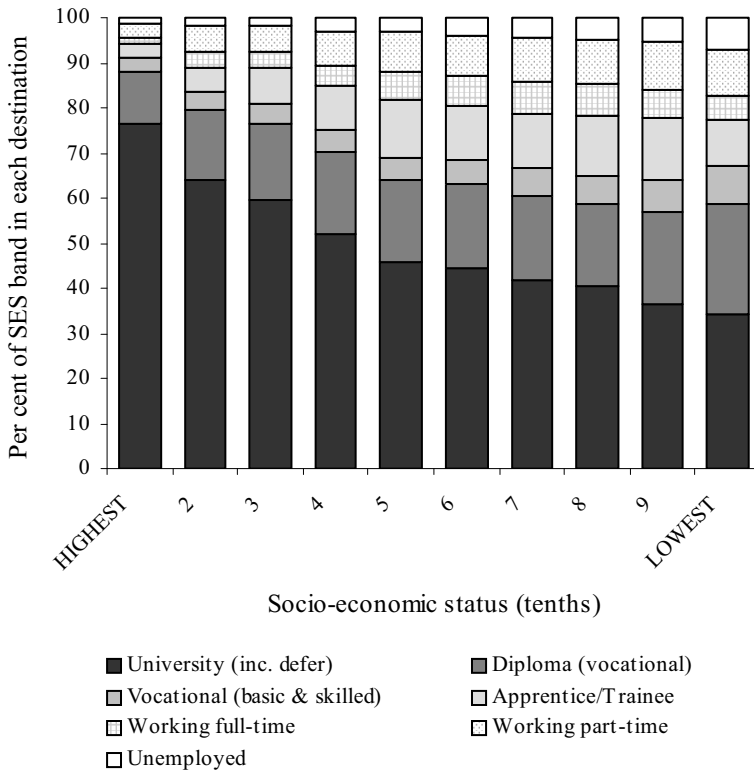


Figure 3.1: Post-school destinations of high school graduates by socio-economic status, Victoria 2005

Descent down the social ladder is accompanied by increasing numbers of young people ending education and entering the workforce. Many undertake craft apprenticeships (4 years duration) or traineeships (1 year). Those who begin work, but without a contract of training (either apprenticeship or traineeship), are more likely to find part-time or casual jobs than full-time jobs. Finally, a small number obtain no work at all. Unemployment amongst non-students rises from 1 in 100 young people from the highest SES backgrounds to 7 in 100 from the lowest.

Each education destination can be broken down into finer classifications which reveal additional layers of relative advantage or disadvantage. For example, the university sector in Australia is diversified into more or less prestigious institutions.

Access to these varies greatly according to the relative examinations performance of students in the final years of secondary school, and this in turn is related to student family background. Less well-known is the academic hierarchy of technical and further (TAFE) institutes. As the admission standard in this sector rises, so too does the average social level of students.

These finer institutional differences in tertiary education — whether university or TAFE — relate to real or perceived advantages in the primary labour market of professional, managerial and technical jobs. They relay or extend the action of an underlying process of selection in which higher SES gives preferential access to the *institutional sector* of destinations, while lower SES favours relegation to the uncertainties of the ‘employment sector’. How this process of selection works is a question which we will address further below in this chapter. However, it is important to emphasise that the social inequalities reflected in post-school destinations are registered at the end of 13 years of schooling, with as many as 3 in 4 of the age-cohort completing school. The long upward trend in the proportions of young people reaching the end of secondary school has in other words been accompanied by ongoing processes of selection which convert the same formal length of schooling (13 years) into very different destinations.

If this snapshot reveals the operation of formidable barriers to equalising social outcomes like the chance of entering university, it also reveals progress in reducing inequalities over the long term. This is why the chart is ambiguous as a social gauge. For if young people from the poorest families have less than half the chance of reaching university from the same number of years of investment in school as the children of the most highly educated families, the fact remains that today every third student from the poorest social background who completes school does reach higher education. This is about twice the overall rate of participation of the age-cohort in the early 1980s (DEET 1993: 333; see also Anderson and Vervoorn 1983: 33).

Let us leave to one side for the moment the question which naturally follows from this observation: maybe the poor only get to low-status institutions whose awards don’t count? And, in a similar vein, maybe the award which sanctions the successful completion of secondary school is itself so inflated that it, too, is of little value? Important as these questions are, they are not as vital as the theoretical issue — how does social selection occur in a context of mass school completion?

### SOCIAL DIFFERENTIATION THROUGH THE CURRICULUM

Patterns of post-school destinations for high school graduates in Australia indicate that the experience of completing school is very uneven. The question is why this unevenness is expressed in social terms rather than being random. We will argue that inequalities in initial post-school destinations are the product of differential social access to two hierarchies of educational opportunity — the curriculum and the school system itself. Unequal access to these hierarchies is further compounded by economic and financial factors, such as the direct and indirect costs of higher education. But these factors are secondary, and their influence can be shown to increase as a function of a weakening relationship to the curriculum, based often enough on a weak location within the school system.

The school systems of advanced economies are hierarchically ordered over two dimensions (for a parallel discussion of vertical and horizontal stratification in the American context, see Clowes 1995). Curriculum can be regarded as a vertical structure. School subjects and ‘streams’ or ‘tracks’ express cognitive demands on students at successively higher levels. While these demands are sharply differentiated in terms of specific subject-matter or content (giving rise to the appearance of widely different worlds of knowledge), there is also a commonality of higher-order intellectual behaviours which unite them and which represent the ‘good student’, whether in science, mathematics or the humanities (see Teese 2000). School subjects can be regarded as attempts to express these generic cognitive demands in codified bodies of specialised knowledge, the mastery of which is an organised, group way of exposing individuals to higher-order demands and inducting them, at least theoretically, into an intellectual culture.

The role of the curriculum as a vehicle for differentiating cognitive demands on individuals entails a selection function which is asserted through program streams or tracks, introduced more or less early in secondary education, and involving more or less segregation of learners, either within programs (‘setting’) or across programs (‘streaming’, ‘tracking’) (for the key role of stream placement in the reproduction of social inequalities, see Bourdieu and Passeron 1970: 106).

In the Australian context, the vertical differentiation of students through curriculum placement operates in the main through informal structures and processes. Decades of reforming effort have gone into creating broadly common programs throughout the compulsory years of secondary education and flexible student programs in the final years, when specialisation occurs. While students will focus on one broad field rather than another, this is not consolidated into well-defined streams which segment the cohort, and many students spread their efforts over several fields. However, this informality and flexibility is deceptive. Beneath the apparently random play of individual choices, patterns emerge which show that even a loosely-organised curriculum is a powerful vehicle of social differentiation, thanks to the academic values associated with different fields of knowledge.

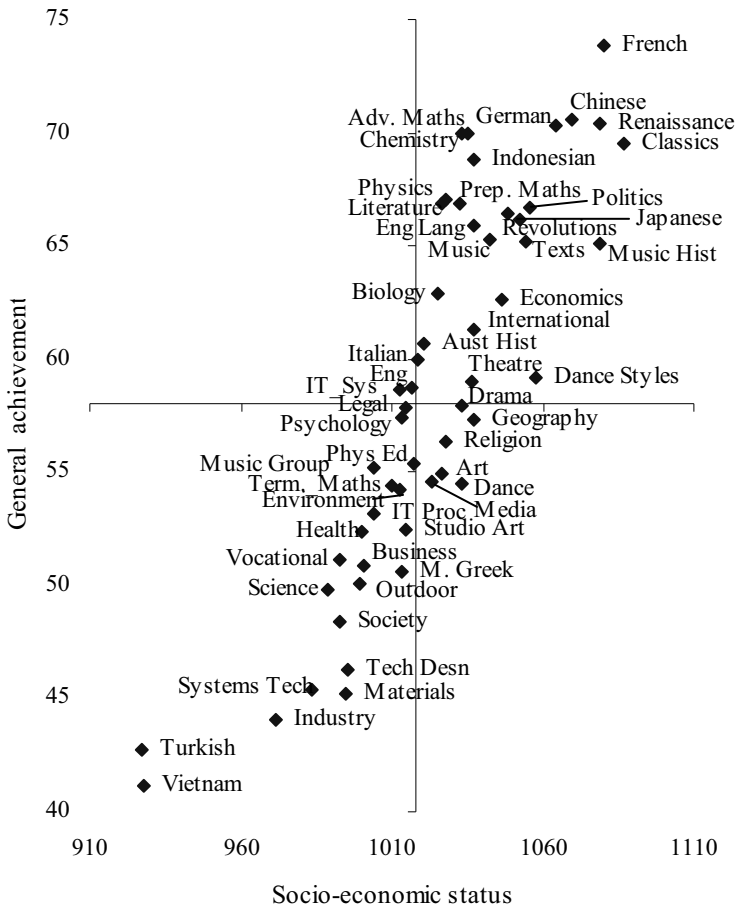
The curriculum as a differentiating structure is displayed in Figure 3.2. This chart compares subjects generally taken in the final year of secondary school according to the socio-economic status of the students taking them (horizontal axis) and their general achievement level (vertical axis).<sup>2</sup>

These two dimensions of stratification are highly correlated ( $r = 0.879$  across 55 subjects, significant at the 0.01 level). The top right quadrant contains the most ‘academic’ subjects — Classics, European histories, ancient and modern languages (other than migrant community languages, like Turkish and Vietnamese, located in the lower left quadrant), physical sciences and mathematics, and a number of older social sciences. By contrast, the lower left quadrant — defined by low average SES and low average general achievement — contains subjects associated with the influx of non-traditional populations into the curriculum, beginning in the late 1970s. These subjects include vocational (VET) and general options — technology, business, terminal mathematics, and recently developed humanities, such as Media

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<sup>2</sup> Based on unpublished data from an Australian Research Council project.

Studies and Dance (for a fuller analysis of these patterns, see Teese 2000 and Teese and Polesel 2003).



It would be too much to suggest that the diagonal linking academic and social dimensions represents a gradient in 'abstraction' — the intellectual behaviour once described as the very essence of a grammar school education (Ministry of Education 1951: 56). However, the ascent up a diagonal that translates social background into academic opportunity does introduce more and more subjects dominated by theory. Throughout the range of arts and science subjects at the high end of the curriculum, students are inducted into the world of theory — the physics of chemical reactions, modelling and measuring change, mathematical concepts and relationships, explaining social phenomena (economics, geography, history), mastering principles of grammar, interpreting text, understanding psychological and literary effects. Across this wide range of content, certain generic cognitive demands are asserted — to identify relationships, detect characteristic forms of problems, utilise concepts learnt in different contexts, hypothesize, mobilise evidence, argue logically, take academic risks, etc. It is not only in the high-end subjects that these generic demands are made. But it is the intensity of the demands and their expression in highly 'academic' material — masses of data of an abstract and learned kind — that ensures they will be used to differentiate learners or, in other words, to select. Nor is differentiation simply a passive operation performed upon learners by teachers: each subject, on the contrary, is seen as a more or less accessible and favourable opportunity to earn marks in academic competition. Each subject has its reputation, its uses, its strategic and functional applications beyond the purely formal objectives of the syllabus design. Ascent into the high-end curriculum may be motivated by intrinsic interest, as seems especially true of the more remote subjects, such as ancient languages (so remote that they cannot even be displayed on the chart) and classical societies. But, whatever the motivation of students, the subjects they take are sites of competition for marks, and each represents a more or less advantageous site to assert distinction. Enrolling in a subject is to join the game, on which no individual logic can be imposed which does not agree, not only with the rules of the game, but with the objectives of 'academic excellence' or domination.

Of course, to occupy the site represented by a subject and to exploit the potential for differentiation that it offers are two different things, even though it is true that just to enrol in high-end subjects involves a degree of selection and of academic self-selection which should not be overlooked. If certain subjects have, on average, high academic and social levels in terms of enrolments, a second layer of selection operates within each subject, dividing strong from weak learners. Notwithstanding the degree of selection required to attempt a high-status subject — which favours high SES over low SES students — more selection on social lines continues to occur through achievement and through the differential classroom delivery of a subject (discussed further below).

Consider the case of Renaissance History. This subject occupies very high coordinates on the map of school subjects, which means that few working-class students take it and few low achievers. Essentially it is a field whose very occupation is a source of social differentiation, before a single book is opened or a single test undertaken. For as many as 43 per cent of candidates come from the most well-educated family backgrounds. Despite the fact that very few working-class students join them — for the obstacles are enormous (beginning with subject image

and ending in extremely limited availability) — this small group can expect to receive high grades only half as often as the dominant upper SES group (30 per cent compared to over 63 per cent).

Chemistry is a subject which enrolls very much larger numbers of candidates — about 16 in 100 students compared to fewer than 1 in 100 students in Renaissance History. While Chemistry is a high-status subject, the social level of students taking it is close to the average across all subjects. This implies more balanced rates of participation in the subject, but there is still a social gradient in participation, which curves sharply upwards as SES rises. So, too, does the likelihood of gaining high grades. Working-class students are the least likely to enrol in Chemistry (13 per cent), and also have the lowest rate of ‘honours’ (22 per cent). By comparison, upper middle-class students have the highest rate of participation (21 per cent) and also the highest honours rate (51 per cent). Thus, while young people from high SES families do not occupy the field of Chemistry at a substantially greater rate than working-class students, their capacity to exploit the field is very much greater. Conversely, while students from a manual worker’s background take Chemistry least often, they are the group who most often fail (17 per cent compared to a mere 3 per cent for students from upper professional and managerial backgrounds) (see Figure 3.3).

Given the intensity of the cognitive demands contained in them, high-status subjects provide an indispensable medium for asserting academic superiority (and for converting social advantage into academic capital). ‘Hard’ subjects are needed to achieve a level of discrimination which, in a constant and reliable way, eliminates competition, either through excessive selection (including self-selection) or through very high performance differences in exams (or both).

The curriculum can operate as a structure for differentiating opportunities only because the subjects it comprises form a hierarchy of cognitive demands. Thus, at one level, how concepts, operations, and data are assembled into a ‘subject’, which in turn may be sequenced into a more advanced subject (e.g., mathematics, languages), is crucial to understanding the socially differentiating impact of the demands made by that subject. Equally important are the design and pace of assessment, whether ‘continuous’ and internally managed by schools or based on external examinations. For all assessment represents a further selection of content, an enforcement of emphasis on what ‘really counts’ (is worth learning), a compression of tasks which is itself discriminating, and a more or less overt effort to distinguish between candidates of otherwise similar quality.

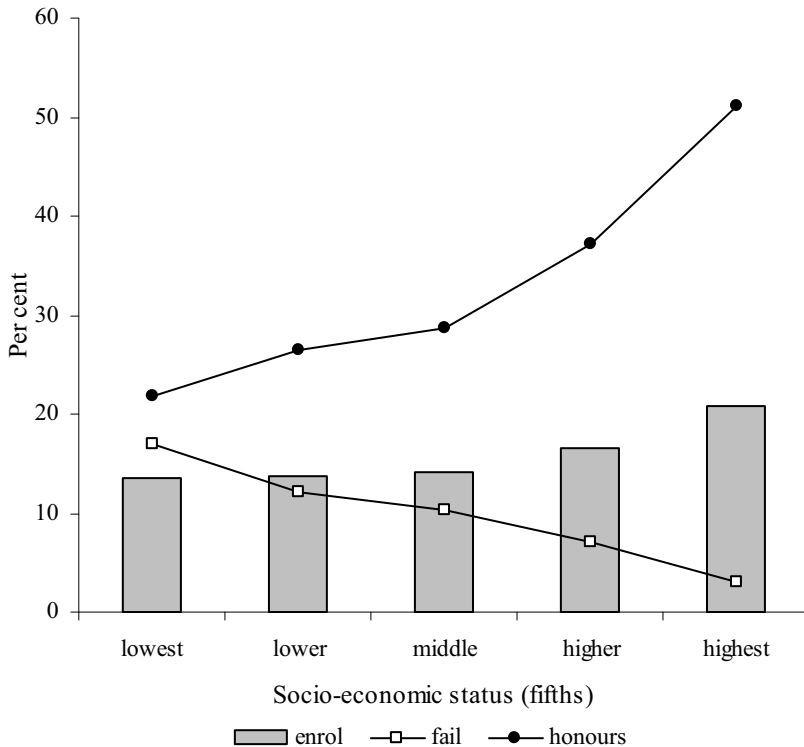


Figure 3.3: Chemistry participation, honours grades and fail grades by socio-economic status, Victoria 2000 (%)

The cognitive demands specific to a subject are socially discriminating not only because concepts and operations are in themselves abstract and complex, but because they exert pressure on the cultural resources of learners and expose differences in how children relate to learning itself (see Bourdieu and Passeron 1970: 91; Bourdieu 1973: 494; 1989, ch. 2; Bourdieu, Passeron and de Saint Martin 1994; Gramsci 1971: 31). Language skills are the most obvious area in which the cultural demands of school subjects, as distinct from specific subject content, enable students to rank themselves. But there are other cultural demands, no less important — the capacity to concentrate for sustained periods of time, to retain masses of information (the symbols of elements, the inflections of irregular verbs), to manage time well, to register at least implicitly the discriminating object of an assessment task, to want to succeed and to take pleasure in success.

But if the creation of a school subject presents many opportunities for concentrating cognitive and implicit cultural demands in a course (*curriculum*), the manipulation of these opportunities is very much a matter of how individual schools work as distinct from how curriculum authorities design and package the course or seek to run the ‘race’ (*curriculum*).

Thus, while we can learn much by studying syllabus design, prescribed textbooks, examination papers, and the reports of assessment panels, this tells us little about the life of a subject at school. The delivery of a subject across the widely varying contexts that schools represent is, in other words, just as important as the design of a subject. This brings us to the second major source of structural inequality in education: the hierarchy of schools.

### SOCIAL DIFFERENTIATION THROUGH SCHOOL SYSTEMS AND SITES

While most Australian children attend public schools, many also attend Catholic or private non-Catholic establishments. Non-government schools are subsidised by both State and federal governments, with subsidies representing between 25 per cent and over 90 per cent of the average cost of educating a child in a public school. Subsidies are not linked to requirements as to which children a private school admits or what curriculum it offers or how much income a school raises through fees or, finally, how money is spent.

It is a very liberal regime under which private schools have prospered, unencumbered by fee restrictions and enrolment rules, and free to manoeuvre within a market heavily underwritten by government. Not unsurprisingly, private non-Catholic schools are patronised by families who have high disposable income. Fees have the advantage of restricting the social and cultural mix of children entering a school, while accumulating a large fund of recurrent income to recruit good teachers, reduce class sizes, provide specialist psycho-pedagogical support, and offer a wide range of extra-curricular programs.

Public schools, on the other hand, are financed mainly by State governments and draw on local catchments (with varying degrees of zoning). Greater management autonomy in some States has enabled public schools serving better-off communities to expand, to raise very significant fee income from parents through voluntary payments, and to compete with private schools. However, most public schools remain effectively zoned to local areas, raise only limited contributions from parents, and are constrained to enrol all children in the area, regardless of aptitudes, interests or behaviour.

The liberal regime under which private schools operate and the growing freedom of higher status public schools to compete with private establishments have tended to polarise the level of schooling where the stakes are greatest. Secondary education is a highly stratified system, increasingly governed by the twin principles of social and academic segregation. These principles not only split up 'public' and 'private', but divide the formally unified systems of Catholic education and public education. Residential differentiation underpins the whole system, but funding policies and free market strategies aggravate the effects of social geography and intensify the phenomena of 'choice'.

The stratification of secondary schools in the State of Victoria is displayed in Figure 3.4. This is a map of about 500 schools which are compared on the average social level of their students in upper secondary classes (horizontal axis) and the average score of students in these classes on a general achievement test (vertical axis).



Figure 3.4 shows that most private non-Catholic schools are located in the quadrant defined by high average social level and high average test score (upper right). Catholic schools tend to be located in the central regions of the chart, with some independent congregational schools recruiting more highly and some also recruiting at lower social and academic levels. Finally, public schools are heavily concentrated in the quadrant defined by low SES and low test scores, though the more selective institutions are found in the top quadrant, including several which recruit state-wide on the basis of competitive entrance tests.

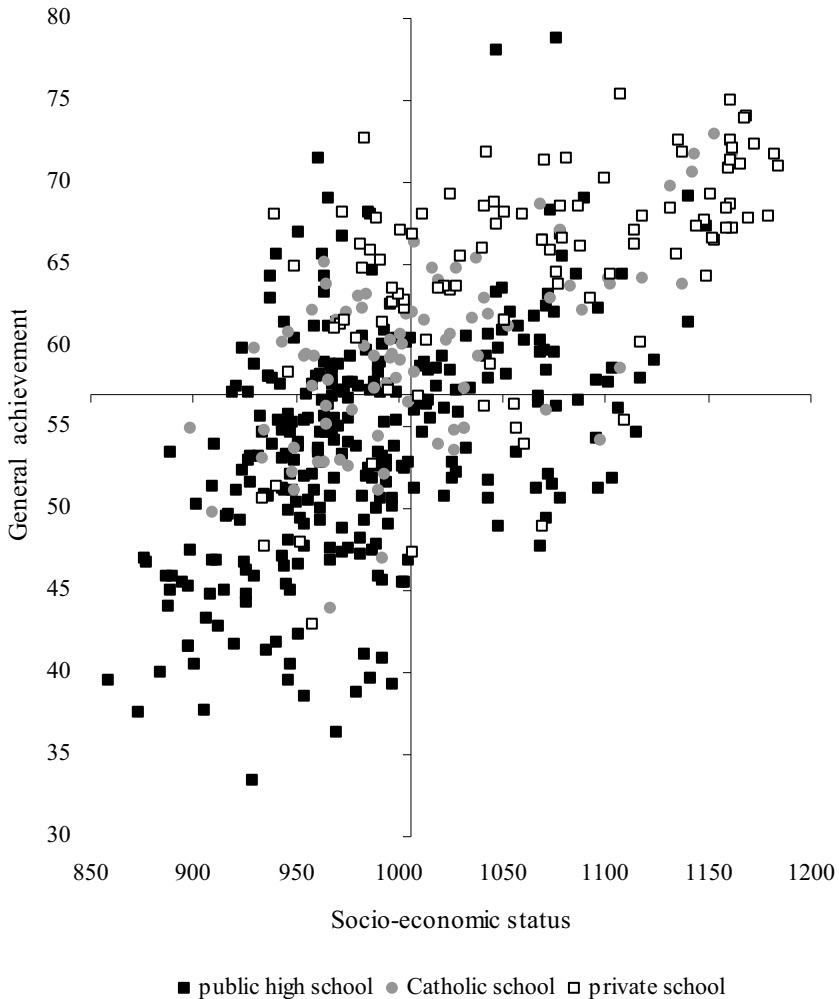


Figure 3.4: The academic and social hierarchy of schools in Victoria, 2000

While the curriculum of secondary education is centrally designed, it is implemented in hundreds of sites which differ widely in social and academic intakes. If the differences between subject options were of little interest in terms of their economic value to students or their strategic value as mobilizers and discriminators of academic ability, there would undoubtedly be less diversity across the range of schools where the curriculum is delivered. But the hierarchical nature of the curriculum calls on parents to search out schools which assure access to 'high stakes' subjects and strong performance in them. No doubt parents derive other benefits from enrolling their children in selective private and public establishments — mixing with the 'right' children, extra-curricular programs, counselling services, excellent facilities, and a complimentary dash of religion to humanise a project which might too readily be judged by fee-levels and four-wheel drives. However, all these cultural benefits are marginal to the academic security offered in segregated establishments, whether private or public. Essentially these are instruments for mastering the high end of the curriculum. This means virtually eliminating the chances of failure and ensuring globally high rates of competitive success, i.e., 'excellence' for most students.

Looking at private non-Catholic schools as a whole, every second student can expect to receive high grades (A+ to B+) in Chemistry, Physics, Biology, preparatory mathematics, Literature, History of Revolutions, and Political Studies. Looking within this sector, it is students attending larger establishments who have the greatest chance of receiving high grades. This is in part because larger schools are much more able than smaller schools to accumulate a high level of specialist teaching resources to manage both school subjects and pupil diversity (the trend to greater size in the sector was discernible more than twenty years ago, see Maslen 1982: 35). But larger schools also assemble a rich mix of pupils with social and cultural advantages, thanks to filtration through fees, scholarships, and reputation.

The impact of school size on the likelihood of gaining high marks in Chemistry is reported in Figure 3.5. This chart also shows that as size increases, so does the average socio-economic status of students, confirming the role of larger establishments (which dominate the sector) in accumulating resources and eliminating failure amongst their students.

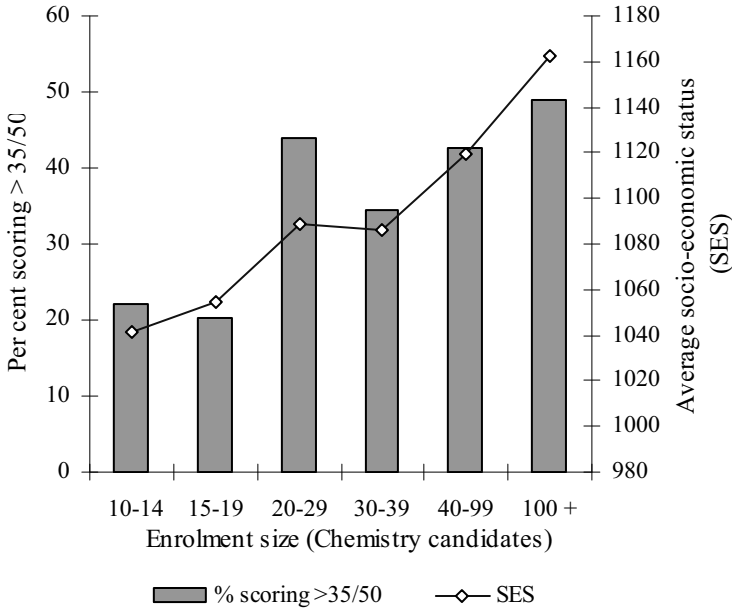


Figure 3.5: Chemistry performance of private schools by enrolment size and socio-economic status, Victoria 2000

Though the public sector is far less selective than the private sector, the policy of managerial autonomy in some States and the capacity of public schools in well-off areas to raise public funds has meant a similar trend to enrolment expansion and resource concentration in these schools (see Lamb 2007). However, while competitive performance rises as enrolments increase, (and as SES also goes up), the proportion of students receiving high marks is lower than in private schools, except for the very largest public establishments (see Figure 3.6).

To gain a bigger advantage requires parents to choose the ‘star’ high schools within the public sector, schools where the benefits of size and SES are greatest. However, there are very few public high schools which can boast the levels of global success found in the largest private establishments — ‘honours rates’ of over 60 per cent in Chemistry and in preparatory mathematics or 82 per cent in Literature.

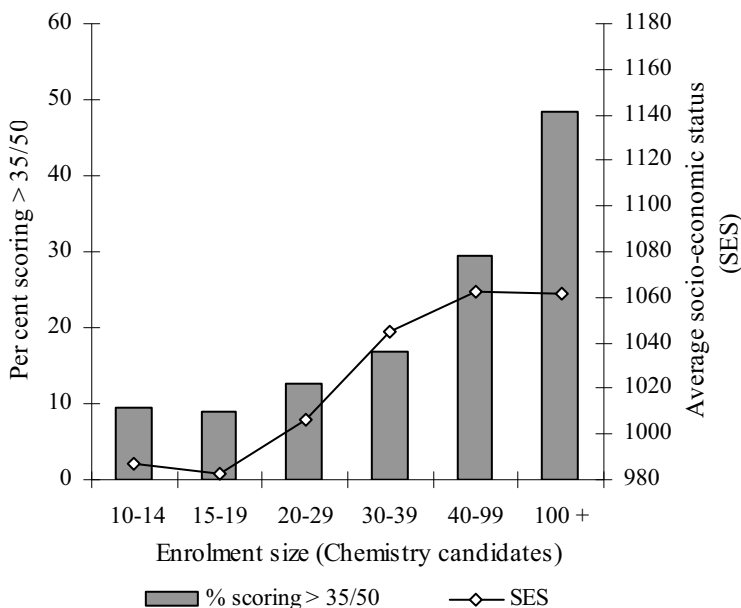


Figure 3.6: Chemistry performance of public schools by enrolment size and socio-economic status, Victoria 2000

### SOCIAL DIFFERENTIATION IN HIGHER EDUCATION

It is the nurseries of academic talent represented by selective private and public schools that not only harness a curriculum which is highly discriminating and selective, but provide the all-important bridge into the most prestigious and lucrative tracks in higher education. Here the hierarchy of schools merges with another institutional hierarchy, defined in part by differences between universities and in part by differences between courses within universities.

Unequal access to subjects of greater or lesser discrimination and differential achievement within subjects are the basis of ranked assessment, and it is student academic rank which generally governs access to Australian universities. Institutional reliance on score enables a direct communication of social influence. In other words, simply by relying on an academic measure of student rank, universities filter their intakes along social lines. The more academically selective the university — to return to a question raised earlier — the more severe the degree of social filtration.

This basic relationship can be seen by measuring the proportion of tertiary applicants from working-class backgrounds in each band of rank achievement.

Figure 3.7 shows that only a minority of young people who rank in the top 10 per cent of all students admitted to university are drawn from the homes of manual workers (every fifth). The sub-group from the poorest families represents only 9 in 100 of the top performing students. As we descend the scale of rank achievement, there is a rising proportion of young people from the poorest families, reaching a maximum of 48 in 100 of university entrants with the lowest rank achievement. Note that at this point in the achievement scale there are only 58 school-leaver university enrolments or deferrals.

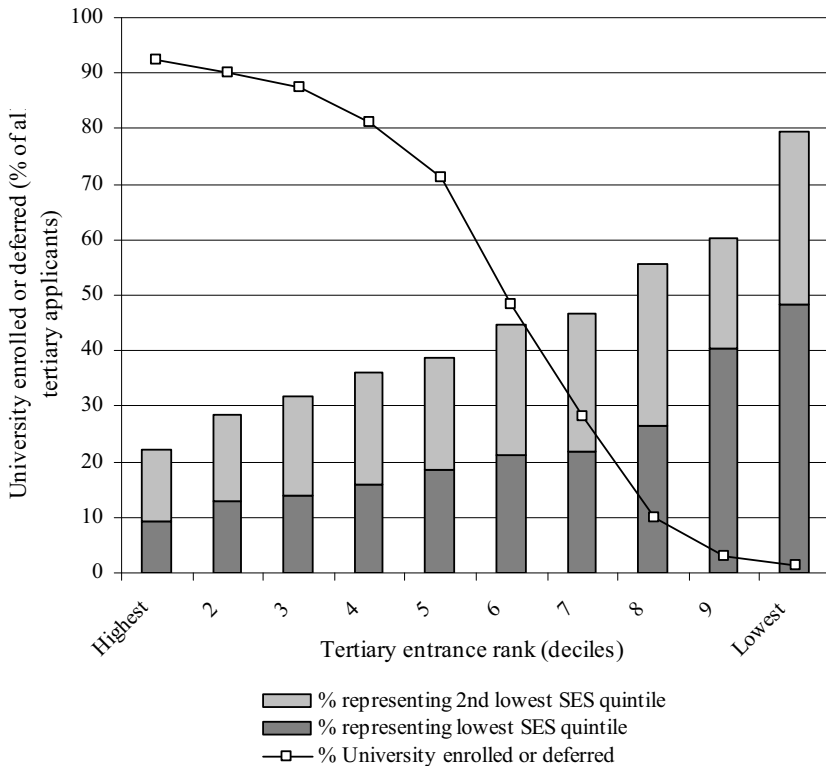


Figure 3.7: Enrolling in university by general achievement band and social profile of each achievement band

This relationship ensures that using rank academic achievement to choose students is also to exercise a social choice. For a university to assert pre-eminence in social status, it need only narrow its intake as far as possible on academic lines.

To the extent that this happens across the whole of the university sector (though to varying degrees), young people of working-class origins are progressively pushed out of the elite institutions into newer and less prestigious ones, then out of higher education altogether and into vocational training (where another hierarchy of institutions and awards awaits them) and finally into the workforce (where again a

hierarchy operates as between employment with a contract of training of four years or only one year, or between full-time work and part-time work, between continuing or casual employment, or finally no work at all).

This by no means happens ‘behind the backs’ of young people. For as achievement falls, more and more school graduates simply do not apply for a place in university or even in the lower-status TAFE institutes. As Figure 3.8 shows, aspirations for tertiary education fall with every fall in achievement, but the drop is greatest in the case of the students in the lowest quarter band of rank achievement. But this chart also shows that within every band of achievement, an improvement in socio-economic status above the lowest two bands raises aspiration levels and works against relegation. Class protects against failure, even while greatly reducing its likelihood. It is the lowest achievers who gain the most protection from their social class, a result exactly opposite to how the school system as a whole works (see section 5 below).

From the perspective of senior high school students, Australian universities rank themselves by the relative severity of selection standards. It is this perspective which structures demand for places, for published standards supply the framework within which students assess their own chances. The better the exam results, the wider the frame of reference and the more ambitious the aspiration.

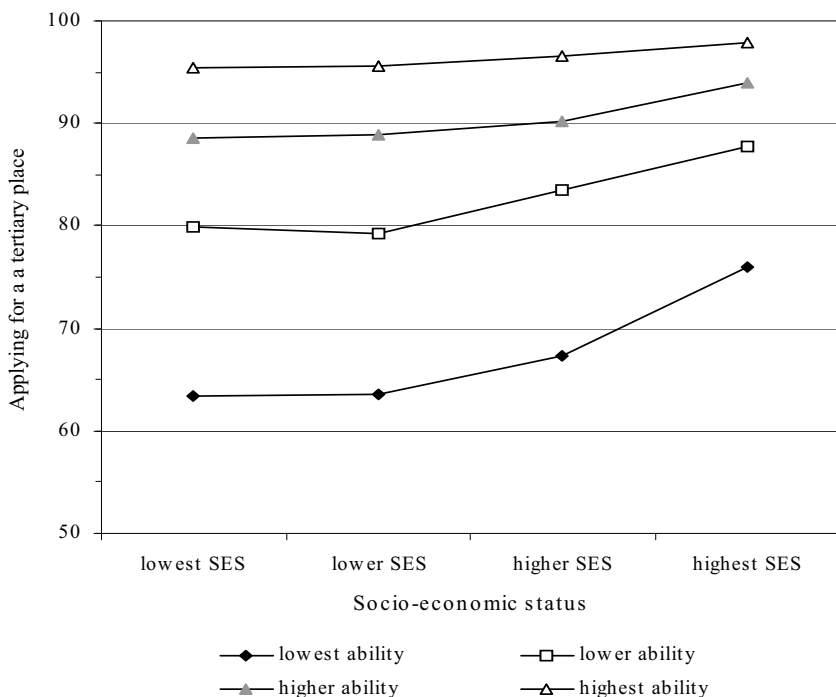


Figure 3.8: Applying for a tertiary place by socio-economic status and general achievement (%)

However, performance is closely related to student socio-economic status. Thus, through the medium of academic performance and student self-selection based on this, universities acquire a relative social rank. This can be seen in Figure 3.9.

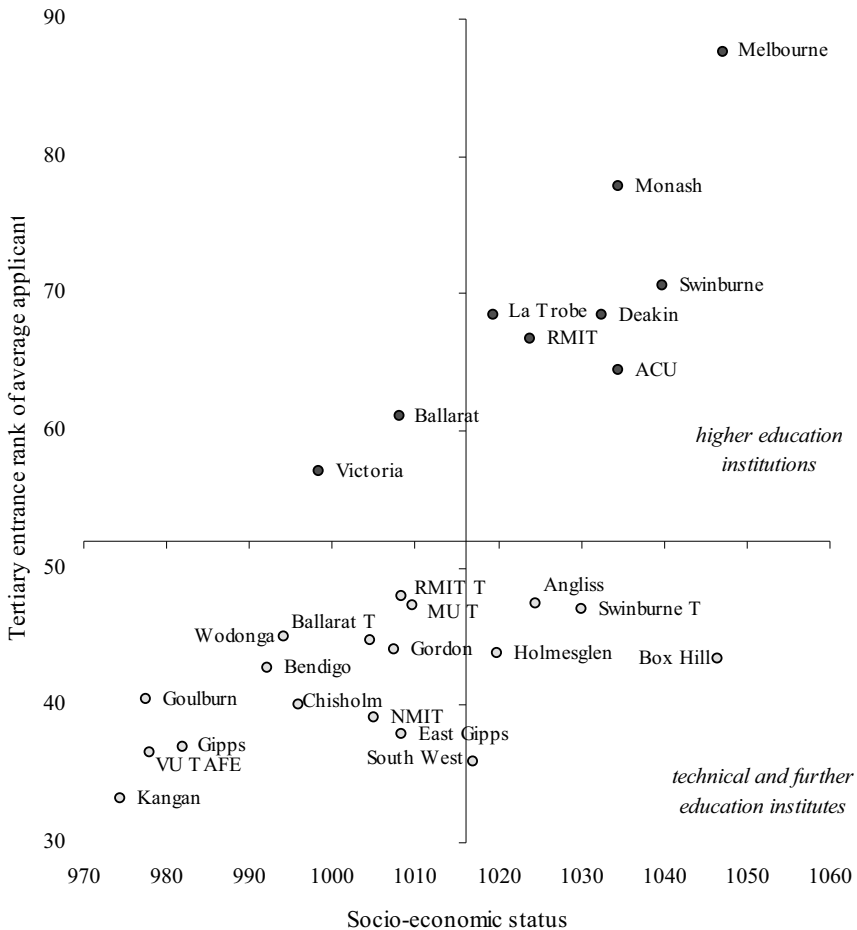


Figure 3.9: The academic and social hierarchy of tertiary institutions in Victoria, 2005

But universities are not simply mirrors of academic and social demand: they actively select students from amongst the already self-selected groups applying to enter them. Self-selection, based on known intake standards from previous years, reduces the extent of ‘culling’ that high-prestige institutions perform at the point of offering places to qualified, but uncompetitive candidates, while low-prestige institutions are compelled to ‘cull’ more severely, given the lower average academic

level of their applicants. But the final result is a sharper institutional differentiation within the university system, first between the older ‘sandstone’ institutions and the newer universities, and secondly between these and the institutions serving the poorest communities, whether urban or provincial.

Within universities, selection by academic score produces social segregation by *course*. This can be seen by dividing higher education courses into ten equal bands, according to the average score of students enrolling in a course (or receiving an offer, but deferring enrolment for a year). The social profile of each band of higher education courses can then be examined. Figure 3.10 shows that nearly two-thirds (or 63 per cent) of all students enrolling in the most academically selective courses are drawn from the highest two quintiles of socio-economic status and only about 1 in 4 (or 24 per cent) from the lowest two quintiles. By contrast, the least selective courses enrol only about a third of students from the highest SES bands (32 per cent), but nearly half (or 46 per cent) from the lowest bands.

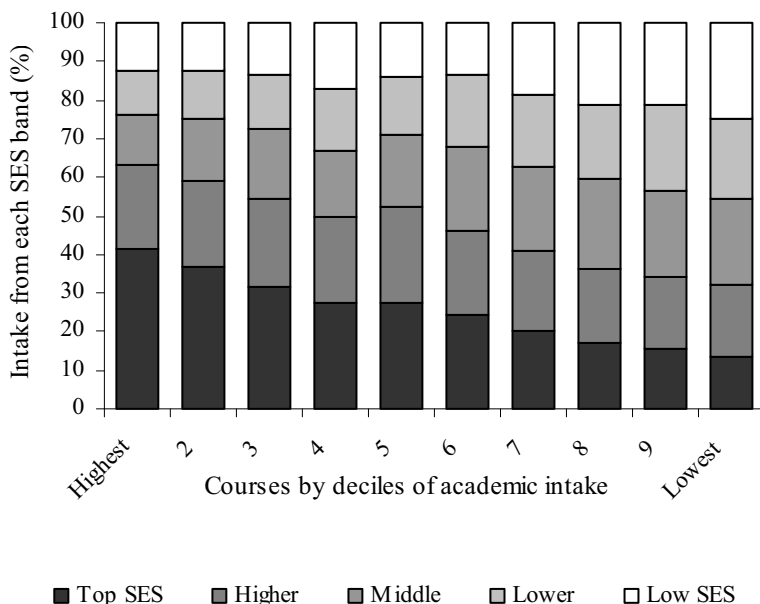


Figure 3.10: Social profile of higher education courses by academic intake standard

The academically most selective courses have 18 per cent more students from upper socio-economic status families than would be expected from the total share of enrolments contributed by these families, while the least selective courses have 10 per cent fewer students from upper SES homes.

Selection operates to create social enclaves within Australian higher education. At the high end of the system, course segregation along social and academic lines tends to recapitulate institutional divisions within the school system and operates as



a kind of relay. Private school students dominate almost all of the ‘top ten per cent’ most academically selective courses — business management (upmarket), law, medicine, dental science, physiotherapy, pharmacy, optometry, biomedical science, architecture, engineering (selective), and numerous ‘boutique’ double degrees and combinations. Almost all of these ‘top ten per cent’ courses are found in the oldest and most prestigious university (the University of Melbourne).

Figure 3.11 reports the level of over or under-representation of private school and public school students in the ‘top ten per cent’ most selective courses. While about 29 per cent of students enrolling in these courses could be expected to come from private schools on the basis of their total share of university offers, they gain on average 45 per cent of all places in elite courses. When students from mainly independent Catholic schools are included, the share of places in elite courses enjoyed by non-government school students is on average 62 per cent and is as high as 82 per cent.

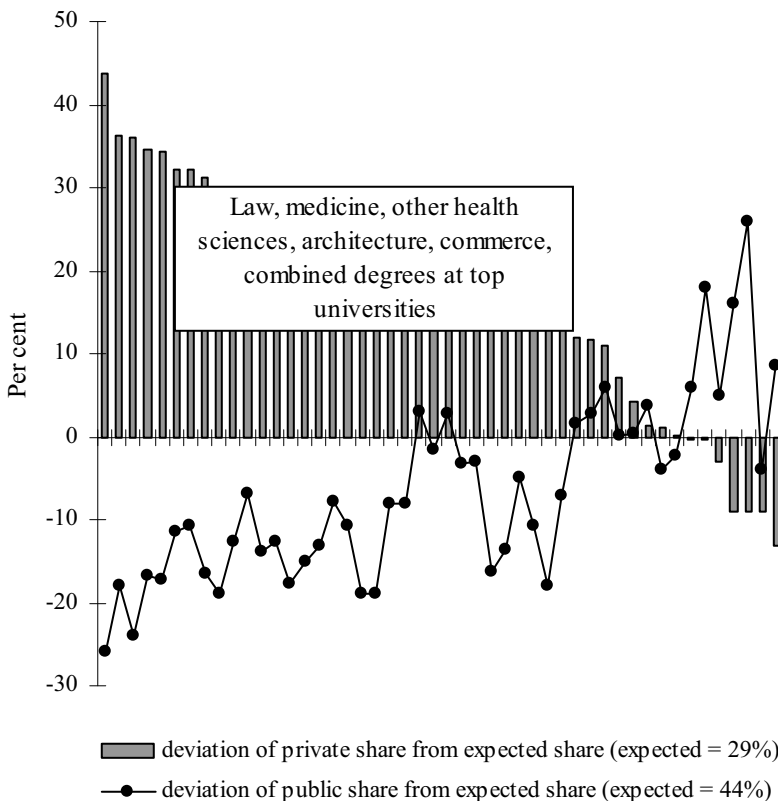


Figure 3.11: Relative shares of private and public school students in the top ten per cent of university courses (%)

## CONVERTING SOCIAL INTO ACADEMIC ADVANTAGE: THE ILLUSION OF ACADEMIC NEUTRALITY

Globally high success reminds us of the importance of difficult subjects in asserting scholarly pre-eminence and of schools rich in resources to master these subjects. A hierarchical curriculum does not presuppose a hierarchy of schools, but it does so once the majority of the population is placed in objective competition in order to reserve the greatest benefits of schooling to a social minority.

The two institutional planes on which social differentiation works — the curriculum and the school system — have reacted on each other historically. To take only one example, during the 1960s the science curriculum was reformed to strengthen its theoretical foundations. This put pressure on schools to employ more highly trained teachers (e.g., physics graduates to teach chemistry) (Teese 2000: 82). Over time, the accumulation of highly trained and experienced teachers in the most academic environments of the school system has exerted a conservative pressure on the curriculum itself. For the investment in teachers and proven high levels of success resists innovation and experiment and constrains further reform to marginal adjustments which do not impede the established flow of individual and institutional benefits.

However, it is not simply the creation of cultural and institutional inertia at the upper end of schooling that ensures a continued reproduction of social inequalities. If upper secondary education offers the greatest scope for the exercise of social power — thanks to the richness of the curriculum and the predominance of graded assessment linked with university selection — social inequalities in achievement appear very much earlier than in this more overt phase, which might almost be described as one of conspicuous consumption. There is already an achievement gap in the earliest years of primary school (and indeed in early childhood). With the passage of time, this gap tends to widen.

Based on teacher assessments, about 11 in 100 primary school children are at the beginning or lower benchmark across different strands of cognitive development (averaging across year levels) (DEET 2001). But over the four years of junior high school, this proportion doubles. What is remarkable in this cumulative gap is that it occurs despite the accumulating experience of children as learners in a school setting. In other words, though children acquire more and more experience as students — accepting the routines of the classroom, the role of the teacher, the give-and-take of social relations, the project and task orientation of schoolwork, and increasingly also homework — the cognitive gap between children actually widens rather than contracts. By age 15 — at approximately the end of compulsory school — the greatest degree of cognitive diversity exists between them, in no small measure because there are more tools available to distinguish between them (specific subject areas of the curriculum and graded assessment).

But is it simply a question of greater institutional facility to distinguish between individuals or rather the operation of academic values connected with the transmission of specialised knowledge that induces teachers to select? It could well be concluded that school plays a bigger role in *differentiating* children (despite the common purposes of compulsory schooling) or of accentuating rather than moderating the cognitive differences between them (for an analysis of the greater

relative impact of junior secondary over primary schooling, see Duru-Bellat and Mingat 1993: 156; Duru-Bellat 2002: 79-80).

It is this differentiating function which underlies a theoretical illusion of fatal consequences. On entry to school, the differences between children reflect uneven preparation in families unequally schooled. Over time, the achievement of children themselves establishes a platform of cognitive skills and interests (and also of social competence) which is separate from the cultural capital and ethos inherited from the family (though still constantly at work in day-to-day life). Initial social advantages raise this platform, but then recede into the background as the knowledge and skill level of the autonomous learner become the direct points to which the cognitive demands of the curriculum are addressed. Progressively, individual differences in achievement at one point in time become the best predictor of achievement at a later point in time. This gives rise to the appearance that the influence of social origin is very limited and is almost entirely eclipsed by other 'contemporary' factors, above all individual achievement, but also how schools and especially classrooms work.

Seductive as this view is, it ignores the initial importance of social background factors — class relationships to learning, as Bourdieu describes them (Bourdieu and Passeron 1970: 110, 144, 163) — and how these enable the child to build a more or less robust platform of achievement on which to meet the demands of school. Should school prove too weak to reduce the gaps between individuals — essentially to enable the weakest learners to catch up, without on the other hand *holding back* the strongest — it will be the initial social advantages and the higher relative cognitive levels which rest on these that will dominate not only the beginning of schooling, but the whole of schooling.

It is this weakness which is worn by school as a strength. For the widening gap in achievement inevitably appears as due to individual differences to which school has merely responded and which it successfully articulates in the grades it awards and the different programs to which it admits its students. The vanishing influence of social origins appears to be borne out by statistical modelling (for a critique, see Bourdieu and Passeron 1970: 90ff). For all that is necessary to evacuate the social factor are tests of prior learning. The closer in time and the more similar in content, the more test results on an earlier measure will predict results on a later measure, exhausting much of the variance and leaving little for social background — or any other 'background' variable — to explain. The *'death of class'* can be extracted from this process, and to the extent that there is any scope left for apportioning blame (most of the variance having been exhausted), the finger is pointed at bad teachers to whom bad pupils are stuck by some mysterious glue of the social order.

But in the end school escapes unscathed. Its failure to reduce the widening achievement gap — to correct for initial inequalities — means that social advantage is effectively embedded in early achievement, whose effects will be lasting, and also that the results of early advantage will always appear as due to individual learning, aptitude or predisposition (allowing for the marginal inefficiency of some teachers).

School covers its own tracks through a theoretical illusion. This illusion serves not only to legitimate social differences in student learning throughout the compulsory years, but differential access to the curriculum in the final years of secondary school, achievement gaps within programs at this level, and markedly

unequal access to courses and institutions within higher education. Cumulative disadvantage is progressively relayed and articulated through streams and courses, a process of ‘conversion’ which covers over the social origins of inequality by substituting differences of academic merit (Bourdieu and Passeron 1964: 26 & n; 1970: 110-111; Bourdieu 1966: 334; 1989: 79). After all, the best predictor of access to universities which base their admission on ‘score’ is the rank achievement of students, not their socio-economic status. But this apparent fairness masks the striking degree of social selection operating through ranked achievement, something even more pronounced in the social correlates of subject participation and performance through which achievement and rank are produced.

One further example from the curriculum of mass secondary schooling shows that even streaming within a discipline does not dispose of the problem of equity by removing ‘artificial’ competition between unevenly-matched opponents. If misplaced ambition and imprudence lead many working-class students to attempt the examinations for preparatory mathematics — the gateway to all the most profitable courses in university — it may come as little surprise that their casualties should be high, even from a modest rate of participation. For 37 per cent of girls and 39 per cent of boys from the lowest band of SES receive low marks compared to only 8 per cent of girls and 9 per cent of boys from the highest band (whose rates of enrolment are on the other hand very much higher) (see footnote 2). But what are we to make of the long casualty list in *terminal mathematics*, designed specifically for working-class students on the road to employment? This is a subject with more options and contextual flexibility and an overtly practical bias. Is it conceivable that every third working-class candidate should fail this subject too? For in this, the so-called “vegie” option in mathematics, as many as 33 per cent of lower working-class girls and 38 per cent of boys receive low marks. And if these rates are between 4 and 5 times the failure rate experienced by upper middle-class students (who are almost as numerous to enrol), the dead hand of class has surely not relaxed its grip.

The exercise of social power through the curriculum and through the schools that have mastered the curriculum is too conspicuous to be ignored. But the illusions generated by the action of school itself provide an ideological screen behind which both policy-makers and theoreticians find shelter.

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## 4 Distinction, Representation and Identities among Middle Class Fractions in London\*

*Stephen J Ball and Carol Vincent*

How middle-class families choose childcare arrangements matters not only for the early educational advantage which quality childcare may provide, but for what choices reveal about how parents see themselves in class terms and their relationship to the wider society. This chapter aims to re-think and re-conceptualise a set of data drawn from an ESRC-funded study of middle-class, or more precisely, service-class (Goldthorpe 1995) families in two London localities. The study focused on these families choosing childcare, but in this paper we are not so much interested in the families' childcare arrangements per se as in aspects of the relationships among and representations of the class fractions within this middle-class sample which are illuminated by this choice-making. Particularly in the conclusions, we shall think aloud and offer some speculative possibilities for thinking about class relations and class representations and explore some of the ways in which middle-class families 'insert' their children into the social world differently through the 'language' of 'consumption practices' (Baudrillard 1998: 60). What will be argued is that different fractions of the London middle class have different conceptions of 'the social'. We go on to suggest, rather tentatively, that these differences feed into different forms of local social relations or local habituses. Here, then, we address both the differentiation of class fractional values and lifestyles within our middle-class samples, and the ways in which these differentiations are enacted to produce and reproduce boundaries within the middle-class that is the constructions of 'us' and 'other' within the middle-class. There is an interesting irony in one aspect of the analysis presented. That is, while in one locality and among one fraction of the middle-class forms of inter-ethnic diversity and mixing are valued, at the same time forms of intra-class mixing are avoided.

A focus on the organisation and choices of child care provides substantive insights into 'class processes' in one social field, the ways in 'which groups attain, establish and retain their positions within the social order' (Crompton 1998: 166) and thus the processes of social closure and exclusivity which shape the class structure. These

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\* This is a re-drafted, re-oriented and abridged version of a paper which appeared in *The Sociological Review* Ball, S. J., C. Vincent, et al. (2004). "Middle class fractions, childcare and the 'relational' and 'normative' aspects of class practices." *The Sociological Review* 52(478-502).

childcare choices also highlight some subtle distinctions and tensions of values and lifestyle within the middle class, between class factions, what Butler and Robson (2001: 1) refer to as patterns of ‘nuance and diversity’, but it may be that eventually we are ‘too eager’ (Butler with Robson 2003: 42) in our mapping of these. The service class exists in a nexus of contradictions of identity, values and social relationships. It is a class betwixt and between, an ‘intermediate zone’ within which ‘the indeterminacy and the fuzziness of the relationship between practices and positions are the greatest’ (Bourdieu 1987: 12). We want to hold on to and explore both the distinctions and the fuzziness that characterise the middle class ‘to capture this essential ambiguity rather than dispose of it’ (Wacquant 1991: 57) and we are very aware that ‘the search for variation needs to be placed in direct relationship to the related need to examine patterns of commonality’ (Longhurst and Savage 1996: 287).

Bourdieu (1987: 6) argues that ‘The homogenising effect of homogenous conditionings is at the basis of those dispositions which favour the development of relationships, formal or informal (like homogamy), which tend to increase this very homogeneity’. There are certainly plenty of indications in our data of the ways in which childcare and educational settings are sought and used by particular middle class fractions to maintain and ensure social homogamy. However, as Bourdieu (1987: 13) goes on to argue ‘In the reality of the social world, there are no more clear-cut boundaries, no more absolute breaks, than there are in the physical world’. Social boundaries, he suggests, can be thought of as ‘imaginary planes’ or a more appropriate image ‘would be that of a flame whose edges are in constant movement, oscillating around a line or surface’ (1987: 13). This metaphor is apposite as a way of thinking about the distinctions we outline below. The ontological status of the middle class is not ‘ready-made in reality’ (Wacquant 1991: 57).

### *The Respondents<sup>1</sup>*

*Table 4.1 Parents’ sector of employment*

	Battersea Mother	Father	Stoke Mother	Father
<i>Public</i>	7	2	11	3
<i>Private</i>	18	23	12	19
<i>Voluntary</i>	1	1	4	4

<sup>1</sup> The research (Nov 2001–April 2004) explores how middle-class parents choose childcare for their young children in two London settings. The project as a whole addresses a set of issues embedded in the operation of ‘lived’ pre-school, child care markets. The study is a qualitative one, which will when completed involve some 114 semi-structured interviews with parents and providers as well as others closely involved in local childcare provision. It builds upon a pilot study (see Vincent and Ball, 2001). The sample was elicited in a variety of ways; by advertising in local magazines and NCT news letters; putting up posters in local shops, libraries and child care facilities; by attending child care events and facilities and approaching parents or carers directly; and by word of mouth ‘snowballing’.

The paper is based on a sample of 54 mothers, 26 from Battersea and 28 from Stoke Newington (including one single mother). The localities are described in more detail below. The women are mostly white (except one, although a further two are in mixed-race relationships), mostly heterosexual (except one) and mostly in partnerships (except one). They are extremely well educated, nearly all having first degrees and ten having or studying for doctorates. As may be seen from Table 4.1 the mothers in both locations are more likely than their partners to be employed in the public sector. A high proportion of the men and women in Battersea are employed in the financial sector. They are as Butler with Robson (2003: 170) describe them “the ‘servicers’ of the global node”. One of Butler and Robson’s (2001: 2161) respondents commented that “the Northcote Road [in Battersea] is like a branch of the City now”. In Stoke Newington a high proportion are employed in the arts, media, law and higher education (see Table 4.4 at end of chapter for details). A specific combination of social, cultural and economic factors make Stoke Newington and Battersea inhabitable in different ways by middle-class families. Taken as a whole the sample of families is relatively affluent and holds forms and volumes of cultural and social capital that allow them to be fairly skilled users of childcare markets. Furthermore, in most cases, they are firmly embedded in local networks of other similarly advantaged families, with whom they share information and recommendations. The average length of time that the families have lived in the areas is 6.5 years in Battersea and 6.8 years in Stoke Newington; 9 Battersea families have lived in the area for less than 5 years as against 11 of the Stoke Newington families.

### THE LOCALITIES

Our sample is drawn from two areas of ‘gentrified’ London with the intention of identifying different occupational groups and local cultural and lifestyle factors and different infrastructures of care. In these respects we were influenced by the work of Tim Butler and colleagues, who have conducted studies of the development of middle class communities in London. Butler and Robson (2001: 2160) argue that gentrification is ‘localised’ and involves ‘differing relations to forms of capital’ enacted by different fractions of the middle class. As a result distinctive areas have been created, with particular ‘styles’ or characteristics and represented by different narratives. Place can then be considered a dependent variable, with local ‘cultures’ developing from class choices, and attracting ‘like-minded’ others, but these choices are in part also driven by material concerns and necessities, such as house prices and the reputations of local schools. In these terms we selected two areas of London for study, parts of Battersea and Stoke Newington, both of which have featured in Butler’s work. Both areas have established middle-class populations, but are also close to, and in the case of Stoke Newington interspersed with, much poorer working class housing estates and neighbourhoods. Stoke Newington is an area that has been in long-term, gradual gentrification, whereas Battersea has experienced more recent, quickly established social class change. Battersea, or more precisely an area referred to as ‘between the commons’, is also known locally as ‘nappy valley’ because of the large number of families with small children. It is described by Butler



and Robson (2001: 2153) as ‘an area whose “suitability” and “habitability” have been assiduously contrived, primarily through manipulation of markets (in education, housing and leisure)’.

In the central area of ‘between the commons’, the Victorian houses are extremely well maintained and often extended. House prices have risen exponentially in the area over the last 10 years. Thus, residents are strong in economic capital, which is evident in the type of shops and restaurants that flourish on the main thoroughfares and the proliferation of private schools. When asked what attracted them to the area the respondents in our study who lived in Battersea mentioned the presence of many other families with young children, the array of child-friendly activities that has developed to cater for families and the ‘good’, mostly private schools. The local authority, Wandsworth, has pursued a policy of privatisation of housing and education and other services and a regeneration strategy. One aspect of Hackney council’s rather different political strategy has been that of ‘Creative Hackney’ encouraging the development of ‘creative industries’.

In Stoke Newington our respondents also mentioned the presence of other families with children as factors that attracted them to the area, as well as the local, well-equipped park, the cafes and shops but also, and importantly for this paper, the vibrancy arising from the mix of ethnic cultures.

“I like the people, I like the fact that there are lots of people that you could go and have a cup of tea with and feel completely and they’re all slightly different, they’re not the same kinds of people and its quite stimulating having those kinds of different people, doing different kinds of things. And yeah! I like the fact that the children aren’t aware of the mix, that they just take it for granted” (Connie).

There are other differences between the two areas. Houses are smaller and prices are cheaper in Stoke Newington, although rising fast<sup>2</sup>. The area has a more distinctive communal identity than Battersea. Parents often used the word ‘community’ when talking about the ‘feel’ of the area. This is perhaps what Butler refers to as a ‘village in the mind’ (Butler & Robson 2002).

### *Stoke Newington*

“...there are whole swathes of the middle class who work in the media around here.” (Madeleine)

“I wouldn’t want to live anywhere else in London, mostly because Stoke Newington is the closest I am going to get to San Francisco in England.” (Madison)

“...a bit of an artisty type of feel and it’s very ethnically diverse, so that’s what probably attracted me,” (Caroline)

Our first concern here is to establish the sense of distinctions, the ‘categories of perception and appreciation’ (Bourdieu 1996: 1-53) experienced and used through the medium of childcare and then consider some other aspects of the ‘labour of identification and decoding’ (1996: 100) involved in the making of classifications, in

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<sup>2</sup> As a crude indicator, in 2002 the average terraced house price in Wandsworth was 365k, in Hackney 280k, with the London average being 244k.

particular the significance of the 4-wheel drive (4WD). Following Bourdieu's urging, we will not simply rehearse these as forms of 'lived experience' but look 'beyond the abstract relationship between consumers and the interchangeable tastes and products with uniformly perceived and appreciated properties to the relationship between tastes which vary in a necessary way according to their social and economic conditions of production' (1996: 100-101). However, this will again be rather speculative.

In what follows a complex set of themes around diversity and mix are interwoven, characterised by tensions of social similarities and differences and integration and separation *within* the middle class. Two quotations from Stoke Newington residents Madeleine and Judy will introduce these themes. In both cases there is a contrast drawn between homogenous and diverse social settings. In both cases, indirectly, contrasts are made between the local habitus of Stoke Newington and that represented in nurseries situated in Islington.

Madeleine is talking here about moving her child from a private Islington nursery to a Hackney nursery run by the Local Authority. This is a move between two very different social worlds, class worlds. It is also a move out of privilege and advantage, and as she explains this provokes a sense of guilt (see Ball 2003a, Chapter 6 on middle class guilt). Madeleine was one of only four parents in our sample (all of them in Stoke Newington) to seriously consider state-provided childcare.

"We're the wrong kind of demographics for [private nursery], which is very much into full-time caring, quite a lot of City [workers], quite a lot of minor media celebrities, which is why she's coming out of there, I think we're gonna have to because it's just too expensive for us, it's like paying half our mortgage every month for three days [a week] At this moment what I'm going to do is take her away from there and take her to a state nursery with [adult child] ratios of 1 to 133. I'm just kind of riddled with guilt about it at the moment because I don't know if she's ready and I don't know if I can do that to her. In the [state] nursery there are about 6 or 7 other white kids. There's 60 kids and I'd say [that for] at least half of them English is their second language and that's very different from obviously paying through the nose, where she is now is not necessarily white but they're middle class. They're professional parents (...). [But] This is why we live in London; I think to have this other experience, the shock and the kind of extremity of it."

There are a number of pertinent issues embedded in this extract. Primarily Madeleine points us to the fault line that exists between private and state provision in this setting, both in terms of the nature of provision and the demographics of access. The class boundaries here are sharp and relate directly to the ability to pay. Madeleine also indicates something of the complex interplay of class and race and the ways in which one or other may be to the fore in different contexts. Also here we see the contradictions for some of our respondents of being *in* but not *of* London; the frissons of spatial proximity and social and cultural distance; the shocks of extremity, of stark differences between classes, as against the celebration of

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3 The private nursery would have adult: child ratios of 1:8 or lower.

multiculturalism. But Madeleine's account also points to 'softer' divisions within her class, the way that she differentiates herself, by income and identity from middle-class 'others' those of the 'City' and 'minor media celebrities'. She is a translator and has a commission to write a screenplay, her husband is a theatre director and playwright. As she explains, she feels as though her daughter is in the wrong place, she is not comfortable, she is the wrong demographic, the other parents here are not like her, she is not like them. Apart from the expense this is not a place through which she wants her daughter introduced into the social world of London.

Judy describes a move in the opposite direction, from a relatively cheap and socially diverse community play group in Hackney to an expensive and exclusive private nursery in Islington, which offered the longer hours of care she needed, and the costs of which were borne by her 'in-laws'.

"The only problem with [private nursery] is that it's not inclusive, it's one of those places that if you're on a high income, so the only people who use it are City lawyers, the peer group is pretty much white and pretty much moneyed, and when they found out my [older] daughter's at the local comprehensive they all freak out, the peer group are all going on to the private sector [but my younger daughter's] peer group at [community play group] are all going on the local [state] school. I am very community minded and my choices would be around the community and things that are inclusive. And this [private nursery] is one kind of blip".

Again there are several significant issues evident here. There is a sense again of Judy's child moving across a boundary of values and income. Judy is 'giving up' on her values commitment to inclusivity and diversity and her child is experiencing an exclusive class and ethnic setting as a result. The values and income differences are pointed up further by the reactions to her elder daughter's schooling. To the other parents Judy's choice of state schooling is alien and dangerous; it is outside of the moral boundaries of good parenting, as far as they are concerned. Judy's awareness of this, of her differences from them, is what we want to emphasise here, but there are also ever-present ambivalences, she goes on to say about the move that "actually it's worked out really well".

There is a tension and duality embedded in the social and moral lives of some members of the middle-class, like Madeleine and Judy, a tension between sociality and values commitments, an orientation towards diversity and a collective social good, as against individualism and homogamy and the press of social reproduction. Such tension, as Nagel (1991) puts it, is between the personal and impersonal standpoints (see Ball 2003a, pp. 111-118). We suggest here that the tensions are resolved differently in different localities by different class fractions.

As noted, four mothers in our Stoke Newington sample did consider or apply for places in state, council-run nurseries, and Hannah did get a 'marketed' place in such a nursery<sup>4</sup> and saw this as a positive thing for her children, the nursery in question being "quite ethnically and you know, social class-wise quite mixed". Mix comes

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4 Parents pay fees for a marketed place in a state nursery, although these fees are generally lower than those of a private nursery. Completely free state provision is only available on the basis of social need.

about from the presence of both ‘people like us’ and ‘others’. But when mix and its constituents are addressed there is often a hesitancy of tone in describing these, in naming ‘others’. “You get people like us, who are paying market fees and then, obviously, there’s a lot of assisted places as well”. Hannah wanted her child to be somewhere “where, you know, it was, sort of, you know different kind of colours and, you know accents and all the rest of it”. But she explained later that “there’s mixed and mixed”. She did not want her children exposed at an early age to aggressive behaviour; although “not everybody who comes from, you know, a disadvantaged background is abusive, doesn’t have any kind of respect for the community they live in, I mean, quite the opposite”. In other words, there are limits to the value of and tolerance of social mix. Caroline also looked at some state nurseries “which were mainly African, African Caribbean, there were no white children in some of them, and then in others there were a few; so I thought whether I wanted his name down in a nursery where the majority culture was not his”. Nonetheless, the private alternative nursery she chose eventually “is very ethnically diverse” and “you couldn’t wish for a better place, in the sense the cultural mix makes it a vibrant place”. But this ethnic mix is also “middle-class, middle-class professional, only because of the cost”. In contrast, and exceptionally, Elsa was happy for her daughter to attend two community nurseries with a majority of African-Caribbean children. One was, “quite friendly, very, very mixed, sort of ethnically mixed. In fact it was more Afro-Caribbean than white. All of the staff were Afro-Caribbean”. Note the “very very”! There is mixed, very mixed and very, very mixed. In the other nursery, her daughter “was the only white child in that class. Which was nice really. You know, it’s just probably if she hadn’t been to nursery, she wouldn’t have had that”. The last comments suggest the clear positivity of such ‘mixing’ which was commonly expressed, although often with reservations, by the Stoke Newington respondents but was certainly the exception in Battersea. Emily, also in Stoke Newington, and herself part of a dual-heritage relationship, with dual-heritage children, explained “what was driving us was having a nice mix of children, I felt that was so important, *I didn’t want him to be somewhere where socially it was all exactly the same children and racially as well*, like most of the more expensive nurseries did tend to be predominantly white, I really noticed that.” Even so the nursery chosen is “predominantly middle-class, middle-class working families, but there’s quite a few mixed race and black children”. Here and in many of the other Stoke Newington interviews the experience of diversity is seen as an important constituent of the social development of children, important to them and for them!

Our discussion so far has hopefully established some sense of the discomforts and distinctions at work here.

### *Battersea*

“We moved from a childless area to “Buggy Jams.” (Margot)

“...perfect for children, it’s not called Nappy Valley for nothing.” (Lynn)

“Both people we shared [our nannies] with were accountants, they’re all accountants round here.” (Linda)

“Both of us are very committed to state education which is very unusual in this area.” (Linda)

In Battersea the themes of mix and difference are played out again, but somewhat differently. The awareness of an ‘us’ and ‘them’, within the middle-class, was again evident from some of the respondents. In some ways, given the demography of the area, this was even more forcefully expressed. Some of the mothers were clear that they did not want their children exposed to settings in which certain middle-class social values they were uncomfortable with were predominant. There are distinct and strongly bounded ‘circuits’ (Ball, Bowe and Gewirtz, 1995) of care and education in play here which are distinguished relationally (in terms of mix) and normatively (in terms of values) within the middle-class. Again, social mix here is a very relative term and in comparison to Stoke Newington there is a strong class and ethnic insularity in this locality. Very few of the Battersea respondents talked about seeking out or attending to social mix or gave it a positive value. In this respect for the Battersea ‘dissenters’, those who did value social diversity, mix is much more subtle, and not a matter of crossing stark boundaries of class or ethnicity, but rather an avoidance of homogamy. Most of the examples below are taken from those Battersea parents who found themselves ‘out of affinity’ or in disharmony with the local habitus and the attendant self evidences of ‘good’ parenting. So where it could be said that in Stoke Newington preferences for diversity predominate, in Battersea a minority of middle class respondents express discomfort with exclusivity and homogamy.

Diversity and homogamy rest upon and are revealed within the power of allusions, asides, avoidances and aversion - the work of loose-fitting but practical classifications, senses ‘of place’ and of ‘being out of place’. In other words, a sense of social structure, ‘a structure of affinity and aversion’ (Bourdieu 1987: 7) of ‘forces of attraction and repulsion that reproduce the structure’ (Charlesworth 2000: 8), the existence of nuanced but serious differences in values-based views of and attitudes toward social mix which are also related to lifestyle differences, consumption decisions and class performativities (cars, clothes, housing etc.).

Juliet draws firm lines between herself and other middle-class parents who are not like her, have different values and higher incomes. She plans to send her child to a state school, as a private school is not a setting she feels comfortable about, either in respect of its particularity or its exclusivity. For her, as for many Stoke Newington parents ‘mix’ is good, but some ‘mixes’ are intolerable, not any state school will do. For Juliet, both those schools which are too working-class and those which are too middle-class, or at least the ‘wrong kind’ of middle-class, are unacceptable. Juliet is thinking of nursery schooling, in part at least, in relation to where her daughter will go to primary school and whether she can get her into Goldwater, a state primary school which is highly regarded and where,

“...there’s lots of well-heeled middle-class parents but there’s also a council estate on the doorstep so there’s a kind of mixture which is nice. It’s not all people driving 4-Wheel Drives like the school across the road [a private school] where you see the kind of procession of armoured cars to collect these children. It’s a fantastic school, they are interviewing children at three [my daughter would] probably do really well but I don’t like the whole deal really, plus you

have to cough up a large amount of money not just for the school but for the uniform.”

Sally also pointed to some subtle differences between her child and what she described as the “very well-dressed class” that attend her daughter’s nursery; dress is a signifier of difference here. She “got an idea of who she [her daughter] was going to school with” from attending children’s birthday parties; “she’s going to school with quite a few, sort of, million-pound-house type children”. Sally also sees a value in social mixing, and is, unusually amongst Battersea parents, keen to find a “more racially mixed” (private) primary school for her daughter, “that would be one of the main criteria”. Despite her view that the parents of other children in her daughter’s current nursery are “lovely people”, she is not entirely comfortable with the social exclusivity of her current nursery. However, while she is “quite OK about sending [her] to private school”, her husband is not. “He hates the whole public schoolboy thing” and “we don’t want her to grow up with a bunch of snobs, like (nearby private school), which is walking distance, and the grounds are lovely, and the teachers are nice, and the classes are small, but they, you know, they’re a bunch of little snots basically”. Once more there is a rejection of middle-class ‘others’, the middle class who are ‘not us’, the carriers of values into which these parents do not want their child socialised. Also once more, however, there is a second tension between normative differences and structural advantage. Because, “then again, if we got into Goldwater (the local state school), she’d be thrown into a class of thirty kids so I don’t know, we are tending toward private at the moment.” Here, a school that is very acceptable to one mother, Juliet, is regarded with considerable suspicion by another, Sally, despite their ostensible sharing of the same class position.

In the case of parents like Sally we could say that private education is preferred both for and despite its effects of social closure, which is not always the case in our sample. Phillipa, like Sally, although again intending to send her children to a private school, contrasts herself and her family with the sorts of middle-class parents to be found in some of the private schools she has visited. They are “sort of very City men and sort of flowery women, and we didn’t feel comfortable with that either for the children or for ourselves”. As Bourdieu (1990: 61) suggests, through the ‘systematic “choices” it makes among the places, events and people that might be frequented, the habitus tends to protect itself from crises and critical challenges by providing itself with a milieu to which it is as pre-adapted as possible’. Again differences in values are alluded to. This is made clearer in Phillipa’s preferred private school, Park Gate, which she describes as “sort of laid back and apparently more liberal and not quite so traditional sort of style”, as opposed to those where “you can get incredibly traditional minds and where there’s a massive focus on looking right, shaking hands, wearing the right clothes,” signifiers of a different habitus. Park Gate is viewed as “a much more broad-based school” and it has, “for example, quite a few black or Asian people in it which you often won’t see in other private schools” and “it’s got some sort of special needs type children”, whereas “some of the other schools we started to call Christian master race schools”. Again a *degree* of ‘mix’ is valued, but again ‘mix’ is relative. There are a variety of boundaries and distinctions embedded here, drawn in different places by different families. Phillipa and Sally are local exceptions. For many of the Battersea parents,

private schools offer a cultural milieu, ‘a communicative order of self-recognition’ (Teese 1981: 103-4), which is coherent and undiluted, and constitutes a ‘protected enclave for class formation’ (Sedden 2001: 134). As Teese (2000) concludes, private schools are fortified sites within diverse school systems which represent class projects and ‘renew middle-class culture and collectivity in predictable ways across generations’.

Alice, like others, is clear that the social mix of her child’s private nursery is “pretty limited, middle-class”. Again she does not see herself as the same as the other parents, “everyone, except me I think, drives these wretched 4-Wheel Drive things which I hate, but that’s the one trouble, for this area’s all very homogeneous really, so, I mean I don’t think there’s any coloured children here”. Again we see minor differences within what is “homogenous,” and major divisions, between this class setting and other classes and ethnicities ‘elsewhere’. Alice wanted the locally-preferred middle-class state primary school (Goldwater) for her son: “I’m very keen that he should go state. I think it’s a really good start rather than imagining that the whole world exists of Volvos and 4-Wheel Drives”. Again, by allusion, Alice points to and wants to avoid for her child the possibility of a life-world view constructed within and limited to a particular sort of and different middle-class social environment from her own, divisions are drawn on both sides.

For some families their view of class relations and the responsibilities of advantage and social reproduction lead to choices which produce absolute relational separations, exclusivity and closure; some kinds of settings are sought and others avoided. For others such responsibilities are off-set by a commitment to the importance of diverse social relations, a balance between the personal and impersonal standpoints (Nagel 1991) which rests on class ambivalences and produces much fuzzier separations.

## DISCUSSION

### *Class fractions and class localities and constructions of ‘the social’.*

We now want to take up and take out some of the themes sketched out above to develop an argument which suggests that different representations and reproductions of ‘the social’ and of sociality are in play here.

It is possible to suggest, albeit tentatively at the moment, that the choices of care and education made by these different middle-class factions are embedded in and reproduce distinct forms of local social relations (see Table 4.2). These forms can be characterised in a number of ways, capturing their different aspects, by drawing upon a variety of sociological vocabularies.

Table 4.2: Forms of Local Social Relations

<i>Stoke Newington</i>	<i>Battersea</i>
symbolic mutuality	Instrumentalism
vertical social capital	horizontal social capital
impersonal values	personal values
community	individualism - market-based
inclusivist	exclusivist
relaxed boundaries	common ideology - strong boundaries

*Inclusivist, community* values are more embedded and more widespread in Stoke Newington and *exclusivist, individualist* values more embedded and widespread in Battersea, but there are some *inclusivist* parents in the Battersea sample and a few *exclusivists* in Stoke Newington, exceptions from the predominant class fraction. In Stoke Newington exclusivity is more evident as children neared secondary school age, but generally in Stoke Newington social boundaries are more relaxed (Bernstein 1996) and more references are made to the importance of impersonal values (Nagel 1991) and to 'public goods'. In Battersea social boundaries are relatively closed, it is increasingly becoming an exclusionary class enclave where personal values predominate and 'sameness, status and security' (Low 2001: 46) are realised (Low is writing about gated communities in the USA). The social relations in each case may thus constitute different forms of social capital, vertical in Stoke Newington and horizontal in Battersea. In both localities, differences in values are related to perceptions of class fractional differences and to childcare choices and thus to patterns of social interaction.

At this point, we want to return to one of the recurring markers of fractional distinction in the Battersea data, the 4WD. The 'deviations and dissidences' (Butler with Robson 2003: 49) in this data point up the 4WD as a tactical demarcator in the definition of class fractions and who and what they are and are not.<sup>5</sup> What does this signify and communicate? How does it represent the predominant values and lifestyle, the habitus, of the Battersea middle class? We want to suggest, not with great originality, that the 4WD as part of an ensemble of social practices indicates and enacts, to use Faith Popcorn's term, the social 'cocooning' of this class fraction. Cocooning is the act of insulating or hiding oneself from the normal social environment or what Popcorn defines as 'the need to protect oneself from the harsh, unpredictable realities of the outside world' (Popcorn and Marigold 1997: 7). The 4WD is a defensive/aggressive choice of car. It enacts both style and substance. It fits with local norms of display and presentation, inscribing distinction 'in the hard durable reality of things' (Bourdieu 1990: 139). Its size and construction provides a highly protected environment, a form of what Williams (1983: 188) called 'mobile privatisation', 'an ugly phrase for an unprecedented condition', in which 'people are

<sup>5</sup> The distaste of the Battersea dissidents for the 4WD is indicative perhaps of other class differences located within matters of lifestyle. This distaste may indicate an adherence to what Savage, Barlow et al. (1992) call the 'liberal professional/ascetic' fragment of the middle class and its avoidance of conspicuous consumption.



living as private small-family units' in a time of unprecedented mobility. This also articulates more generally with the residents' descriptions of the 'between the commons' area and their reasons for choosing it as somewhere to live. "Safety" is referred to repeatedly (see Butler with Robson 2003: 85-90). In relation to this, the 4WD makes its particular contribution to the 'visual landscape of fear' (Low 2001: 56). Now obviously many of us drive cars of some kind, and many people, too many, drive their children to school. But the 4WD in this context carries connotations of a whole 'stylisation of life' and a particular values set. It does this, we suggest, because it fits into a whole set of choices and practices which demarcate a particular class fraction and their habitus, socially and symbolically, in ways which can be distinguished from that which predominates in Stoke Newington. In other words, the Battersea middle class displays a variety of social choices which 'obey a practical logic' (Bourdieu 1990: 77) of privatisation, individuation, homogamy and 'putting the family first' (Jordan, Redley et al. 1994). The 4WD is associated here in particular with the 'school run' and the schools of choice for these families are private social enclaves themselves, as noted previously. They are forms of escape from the risky business of state schooling and its social mixing and concomitant distributions and re-distributions of teachers' time and attention. Such schools 'sell themselves' both in terms of the advantages they offer and the particular values they seek to transmit. They represent and embody traditional forms of education, as signified, for example, in the peculiarities of their uniforms and the games played (rugby, cricket, lacrosse), church attendance and the very familiar curriculum structures and contents. There were no local secular private schools available to the Stoke Newington parents, but two families were intending to use private primary schools. State primary schools were the preferred option, and although state secondary schools were regarded with suspicion by many, the local state secondary is increasingly being colonised by local middle-class families.

Some of these differences in 'embodied dispositions' and social forms are also evident in the overall patterns of childcare choice in the localities, reflecting both the local geographies of childcare and the differently prevailing values of child rearing and sociality in each locality. Some of these differences are indicated in Table 4.3 which shows the childcare choices of the two respondent groups.

Table 4.3: Choices of Child Care

	Battersea	Stoke Newington
<i>Nannies</i>	8 (1 full time live-in)	2*
<i>Nanny share</i>	1	6*
<i>Private nursery</i>	11	8
<i>State school nursery</i>	1	
<i>Childminder</i>	3	4
<i>Au pair</i>	1	2
<i>Private school nursery</i>		1
<i>State nurseries</i>		4
<i>Community nursery</i>		3
<i>Co-op nursery</i>		3

Notes: Most of the Stoke Newington nannies were unqualified, inexperienced and part-time, and employed through personal recommendations or small ads. Most of the Battersea nannies were qualified and employed through agencies. Some of the families had more than one child under 5. Hence the total shown here for types of care chosen adds up to more than 54.

What is most significant, as far as the arguments being advanced are concerned, are the three last categories in the table, and their exclusive use in Stoke Newington. None of the Battersea parents ever mentioned the possibility of using state nurseries which were in any case unavailable to them, none used or was involved in community nurseries and none was involved in the setting up or running of co-operative nurseries. The last two forms of care used by some of the Stoke Newington families are of particular interest inasmuch as they involve active participation in collective, social action: making contributions to the running of community nurseries and working with other parents to establish and run co-operative nurseries, although one of the co-ops was run as a closed, private arrangement. Stoke Newington families were also more likely to be involved in 'nanny shares' and to use unqualified nannies. In contrast, in Battersea qualified nannies are widely used and there is a growing number of nanny agencies in the locality. In their study of six London localities Butler with Robson (2003: 114) found nannies to be the most popular choice of child care in only two areas Battersea and Barnsbury, and they make the point that this 'kept control by ensuring that all socialisation occurred within the home'. Battersea parents were also the most reluctant to allow their children to play outside unsupervised (2003: 129). A different or complementary way of thinking about the childcare arrangements in Stoke Newington is that they involve the use of the social and cultural capitals, of which the families have considerable amounts, as an alternative to economic capital with which they are relatively less well endowed, and that, in part, the differences between Stoke Newington and Battersea inhere in 'different proclivities to prioritise particular capital stocks in order to meet the primary goal of social reproduction and the enhancement of their children's cultural capital' (Butler with Robson 2003: 73).

What we suggest here, following Butler and Robson (2001), are two different, but not necessarily distinct, localised middle-class habituses, which are rooted in different combinations of capital and forms of social relationships. Battersea is more homogeneous, more 'self-contained', as Butler and Robson put it. They goes as far as to suggest that there is a 'one-dimensional and rather stifling atmosphere of conformity' (p. 2153) and a 'very strong sense of "people like us" gathering together' (p. 2153). This commonality and the concomitant sense of safety and convenience of schools and services are important to many of the inhabitants. Social capital and mutuality are interpersonal and primarily instrumental. Social capital is 'present but latent and masked by a culture in which "eating out" is preferred over "joining in"' (Butler with Robson 2003: 12) and 'the common good in Battersea is established through market-based commonalities of interest based on households acting atomistically' (Butler and Robson 2001: 2159), although the local NCT (Natural Childbirth Trust) was very active and a number of our respondents were members. Otherwise we found no examples of participation in a public arena!

In contrast, in Stoke Newington, diversity is a positive value and social, particularly ethnic mixing, is actively sought by many parents as part of the experience of growing up for their child - a different kind of social capital. This is a sort of symbolic mutuality. Alongside this, in stark comparison to Battersea, there are various ways, in relation to childcare, in which 'active mutuality' is valued, e.g. as indicated, co-operative, community and 'alternative' nurseries (Vincent, Ball and Kemp 2004).

As a consequence of all this the sort of 'virtuous pairing' alluded to by Butler with Robson (2003: 1), in which middle-class gentrifiers might have common interests with working-class locals to improve local services, seems much more likely in Stoke Newington than in Battersea where the 'obvious' recourse is to use private sector services<sup>1</sup>. While by no means common, the extract below indicates both some of the ambivalence and mutuality which could be glimpsed in the Stoke Newington interviews:

"...you know, unless your local schools are so awful it's, it's a difficult one this thing. I mean, I have my, sort of, political ideas and then you kind of (inaudible). But politically I feel very strongly that if you don't join in the local schools you can't expect them to get better or whatever."

There are no heroes and villains here, things are not as simple as that, although the account is difficult to write without setting the primacy of social values in Stoke Newington against the primacy of family interests in Battersea. However, another way of thinking about these different socialities is that there are two different sets of interests at work, grounded in different work and career environments which in turn inform particular conceptions of social development and social life. One 'fits' the child for a socially exclusive world and socially homogeneous occupations (the world of finance capital and big business) and the other 'fits' the child for a more social diverse world (the world of public and liberal professionalism, the media and arts). Perhaps in both cases parents are making choices in relation to the 'imagined futures' of their children; for the Stoke Newington parents and the Battersea

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<sup>1</sup> Although the co-operative nurseries were made accessible to only 'selected' families.

‘dissenters’, social mix is important to them for their children’s understanding of and being in the world. In the process, different views of the social are re-constituted through early social experiences and different forms of cultural capital are acquired, leaving ‘their more or less visible marks’ (Bourdieu 1986: 245). Maybe also different adapted rules of ‘recognition’ and ‘realisation’ (Bernstein 1996) are acquired.

All of the above follows Bernstein’s outline of the alignments between class fractions and educational codes, indeed he suggests ‘that location, hierarchical position in the field of symbolic control or in the economic field would regulate distinct forms of consciousness and ideology within the middle class’ (1996: 113) and that agents of symbolic control (Bernstein 1990: 138-140), the new middle class (as in Stoke Newington), with ‘no necessarily shared ideology’ (p. 135) appear more comfortable with ‘relaxed’ boundaries and relative social mix or are at least more willing to postpone the necessities of exclusivity. As noted earlier it was the vibrancy, the ‘difference’, the edge, and its multiculturalism that attracted many of the respondents to Stoke Newington. This was something they wanted to be part of and have their children share, but equally they have an ambiguous and ambivalent relationship with ‘the urban’ of Hackney. These parents were also much more likely to participate in the public sphere, in organising or contributing to child care arrangements. They are also in some respects less sure of themselves and their values, more ambivalent. By contrast the traditional middle class, agents of control in the economic field as in Battersea, who are ‘likely to share common interests and common ideology’ (Bernstein 1990: 135), are more concerned to establish firm boundaries and relative social exclusivity from the earliest stages of their children’s care and education (see also van Zanten 2002). At face value the lives of these families seem more inward-looking and privatised. The Battersea children move from nannies at home to private nurseries to private school, privileged and ‘secure sites’ (Teese 2000) insulated from the frissons of social mix and social diversity. To a great extent they avoid the frissons and ambiguities of the urban. The ‘good life’ is located firmly within the family. These families are very sure of themselves and their values, they are confident and convey a sense of entitlement and yet also seem more wary of the risks and insecurities of social life in London. This area is being socially constituted as a kind of ‘privatopia’ (McKenzie 1994).

Perhaps then these two different settings and trajectories not only confer different sorts of advantages, they also involve the acquisition of what Charles Taylor (2004: 23) calls two different ‘social imaginaries’, that is, ‘the ways people imagine their social existence, how they fit together with others, how things go on between them and their fellows, the expectations that are normally met, and the deeper normative notions and images that underlie these expectations’. As we see from the above, these imaginaries are ‘never just ideology’, they also ‘have a constitutive function, that of making possible practices that they make sense of and thus enable’ (p. 183).<sup>2</sup> Let us push this a little further and argue that what we

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2 Of the six localities studied by Butler with Robson (2003, p. 123), Battersea had the lowest proportion of respondents being members of trade unions (24.1%) and the lowest reporting social, political or religious activity membership s (12%).

glimpse here through these different social imaginaries are different enactments of political life, that is, two different forms of citizenship and of democracy which have significant societal implications. Among the Battersea middle class the families enact and pass on a form of classical liberalism, a minimalist or 'thin democracy' focused on interests and the 'affirmation of ordinary life' (Taylor 2004: 102) and the private and intimate sphere as the focus of the good life, putting the family first (Jordan, Redley et al. 1994) which 'yields neither the pleasures or participation nor the fellowship of civic association' (Barber 2003: 24) and rest on a mix of self-reliance and suspicion. This is the life of what Barber calls, somewhat harshly, the 'small man', a 'greedy, self-interested, acquisitive survivor' who 'uses the gift of choice to multiply his options in and transform the material conditions of his world' (2003: 22). The Stoke Newington families may display something more like a civic republicanism, a prioritising of public good over their own interests, an obligation to active political participation and a commitment to political community. But in fact such a contrast is inappropriate, the fractions are different, but not as different as all that. The differences are subtle rather than stark, similarities abound. We might contrast the certainties and sense of entitlement of the Battersea middle class with the ambivalences and ambiguous sociality of Stoke Newington and highlight different sorts of social engagement with the city.

It is possible again to at least speculate how these visions and enactments of democracy might be related to work contexts and the values which underpin choice of work; one which is invested in the values and practices of free market neo-liberalism and another which is located in an ideological sense in some sort of commitment to a welfare state society.

Maybe also these two fractions of the middle class take up different aspects of the politics of the 'third way'. The former seem firmly embedded within the 'new individualism' (Giddens 1998: 36) and its emphasis on self-fulfilment, but they give little sign, at least in this data, of what Giddens asserts to be the need for living 'in a more open and reflective manner than previous generations' (p. 37), although in different ways at different times both Marx and Rawls also wrote about this need. Brantlinger (2003) turns this need around somewhat and gives a harsher twist to its absence, which she calls 'moral deficit', referring 'to educated middle-class parents who do not think beyond their own children when they interact with schools'. It is among the Stoke Newington fraction that we see some degree of openness and reflection and evidence of attempts 'to find a new balance between individual and collective responsibilities' (Giddens 1998: 37) and forms of social participation in a public and sometimes collective sphere, '(they) don't just make judgements, (they) worry, sometimes agonise about them' (Kymlicka 1989: 11). Interestingly these differences reflect empirically long-standing, but rather abstract debates within liberal philosophy between versions of liberalism which emphasise 'atomism', human individuals as essentially solitary, and those versions which argue for the importance of 'embeddedness', social roles and communal relationships (see Kymlicka 1989). What these data suggest is that many of the abstract and 'reasonable' assumptions, made by writers like Rawls and Kymlicka, about human values and civic humanism used as a defence for political liberalism, are both mistakenly generalised and mistakenly ripped out of context; the context of interests,

of working lives, of social location, of educational experience. Giddens' 'balance' and Nagel's 'duality' and Rawls' 'two-faced' (Hampshire 1993: 44) civic humanism have their final validity not in the elegance of argument, but in the reality of practices in the everyday world of choices. In the settings described and data offered here they are evidently not universal and this is a matter which has social and political consequences for us all.

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Table 4.4: Biographical Data

<i>Pseudonym</i>	No. of children	Children's Ages & Genders	Mothers Working Hours	Mothers Current or Last Employment	Fathers current employment	Mothers Education	Fathers Education	Years in the Area
<b>Battersea</b>								
1	3	Boy 7 Girl 5 Girl 2	Part-time	Probation Officer	Project Manager, Housing Association	Masters or Similar	First Degree	8
2	2	Boy 3 Girl 1	Home	Paediatrician	TV Producer	Masters or Similar	Masters or Similar Oxbridge	9
3	1	Boy 3	Part-time	Independent Writer & Lecturer	Programme Director, Civil Service	PhD or Several Masters, Oxbridge, New Oxbridge	Masters or Similar Oxbridge	7
4	3	Boy 5 Girl 3 Boy 1	Home	Engineer, Civil Service	Civil Engineer	First Degree Oxbridge	First Degree Oxbridge	5
5	2	Boy 7 Girl 3	Home	Administrator	Financial Director	No Professional Qualification	First Degree	6
6	1	Girl 2	Full-time	Reader	Travel Agency Manager	PhD or Several Masters,	First Degree	2
7	2	Boy 2 Boy 0	Full-time	Accountant, City Bank	Asset Management, City Bank	First Degree	First Degree	5
8	1	Boy 2	Home	Asset Management/ PR/ Marketing, City	Stock Broker, Corporate Business	Masters or Similar	Masters or Similar	5
9	2	Girl 2 Girl 2 (twins)	Part-time	Lawyer, Civil Service	Solicitor in Private Practice	PhD or Several Masters	Masters or Similar	5



Continued: Table 4.4 : Biographical Data

	<i>Pseudonym</i>	No. of child-ren	Children's Ages & Genders	Mothers Working Hours	Mothers Current or Last Employment	Fathers current employment	Mothers Education	Fathers Education	Years in the Area
10	<i>Alice</i>	1	Boy 2	Part-time	Editor, Free Lance	Financial Advisor/Analyst, Corporate Business	First Degree	First Degree	2
11	<i>Monica</i>	2	Boy 1 Boy 0	Full-time	Head of Department Local Authority Management	Own Investment Company, Chartered Surveyor	First Degree	First Degree	10
12	<i>Sally</i>	1	Girl 3	Home	Educational Director	CEO in PR Company	Masters or Similar	First Degree	3
13	<i>Margot</i>	3	Boy 3 Girl 1 Girl 0	Full-time	Lawyer, City Bank	Own Business in Asset Management	Masters or Similar	Masters or Similar Oxbridge	3
14	<i>Nancy</i>	2	Boy 2 Girl 0	Home	Equities Director, City Bank	Managing Director, city Bank	First Degree	No Professional Qualification	2
15	<i>Anjali</i>	1	Boy 7	Part-time	Teacher, Primary School	Independent Writer	Masters or Similar	First Degree	20
16	<i>Trisha</i>	1	Girl 1	Part-time	Marketing for Husbands Company	Own Consultancy Business, 10+ Employees	Masters or Similar	PhD or Several Masters	7
17	<i>Jill</i>	2	Girl 2 Girl 0	Part-time	Operational Research Consultant, Employed	Political Lobbyist, Major Company	PhD or Several Masters, New University	PhD or Several Masters, New University	5
18	<i>Linda</i>	3	Boy 11 Boy 8 Boy 4	Part-time	Charity Consultant, Self Employed	Education Consultant, Elf Employed	Masters or Similar Oxbridge	Masters or Similar Oxbridge	18

Continued: Table 4.4: Biographical Data

	<i>Pseudonym</i>	No. of child-ren	Children's Ages & Genders	Mothers Working Hours	Mothers Current or Last Employment	Fathers current employment	Mothers Education	Fathers Education	Years in the Area
19	<i>Lynn</i>	3	Girl 5 Girl 3 Boy 1	Part-time	Civil Servant	Accountant, Corporate Finance	Masters or Similar Oxbridge	Masters or Similar	10
20	<i>Kathryn</i>	3	Boy 8 Boy 5 Girl 3	Part-time	Speech Therapist	Managing Partner, City Law Firm	PhD or Several Masters, Oxbridge	Masters or Similar Oxbridge	13
21	<i>Ruth</i>	2	Girl 5 Girl 1	Home	Middle Management US Bank	Senior Management, City Finance	Masters or Similar	Masters or Similar	2
22	<i>Holly</i>	2	Girl 3 Girl 1	Home	Chef & Cookery Writer	Practising Management, US Bank	Professional Diploma	PhD or Several Masters, Oxbridge	1
23	<i>Eleanor</i>	2	Boy 3 Boy 1	Home	Administration & Lobbying	Fund Manager, Investment Company	No Professional Qualification	First Degree	1
24	<i>Valerie</i>	2	Girl 4 Boy 2	Part-time	Just finished PhD, Previously Lecturer	Solicitor, Partner in City Corporate Finance	PhD or Several Masters, Oxbridge	Masters or Similar	3
25	<i>Lauren</i>	2	Girl 4 Girl 0	Part-time	Studying for Final Exams for Architects	Fund Manager, City Finance	First Degree	First Degree, Oxbridge	7
26	<i>Grace</i>	1	Boy 1	Part-time	Senior Legal Advisor	Chartered Surveyor	First Degree	First Degree	6

Continued: Table 4.4: Biographical Data

	<i>Pseudonym</i>	No. of children's ages & genders	Mothers Working Hours	Mothers Current or Last Employment	Fathers current employment	Mothers Education	Fathers Education	Years in the Area
	<b>Stoke Newington</b>							
27	<i>Mary</i>	2 Girl 3 Boy 1	Home	Lecturer	Recruitment Consultant, City Recruitment	First Degree	No Professional Qualification	2
28	<i>Jo</i>	2 Girl 3 Girl 2	Part-time	Administrator	Barrister	PhD or Several Masters	Masters or Similar	4
29	<i>Rosy</i>	2 Boy 3 Girl 0	Home	Nurse	Actor	Professional Diploma	Professional Diploma	12
30	<i>Suzannah</i>	2 Girl 3 Girl 2	Home	Recruitment Consultant	Managing Director, Own Marketing Company	Professional Diploma	No Professional Qualification	2
31	<i>Angie</i>	2 Girl 3 Girl 1	Part-time	Architect, Lecturer	Architect, Lecturer	Masters or Similar, New University	Masters or Similar	8
32	<i>Emily</i>	2 Boy 6 Girl 3	Full-time	Teacher	Computer Programmer	First Degree	First Degree	12
33	<i>Marie</i>	3 Girl 3 Boy 1 Boy 0	Home	No Previous Career	Chartered Accountant	No Professional Qualification	Professional Diploma	4
34	<i>Jean</i>	1 Boy 1	Part-time	Lecturer	Company Lawyer	Masters or Similar	First Degree, Oxbridge	15
35	<i>Barbara</i>	1 Boy 2	Full-time	Massage Therapist, Herbalist	No Partner	First Degree	Unknown	13

Continued: Table 4.4: Biographical Data

	<i>Pseudonym</i>	No. of child-ren	Children's Ages & Genders	Mothers Working Hours	Mothers Current or Last Employment	Fathers current employment	Mothers Education	Fathers Education	Years in the Area
36	<i>Madelaine</i>	2	Girl 2 Girl 0	Home	Translator, Screenplay Writer	Writer, Theatre Director	First Degree	First Degree, Oxbridge	2
37	<i>Kathy</i>	2	Boy 7 Girl 0	Full-time	Charity Fundraiser	Architect, Own Business	No Professional Qualification	First Degree, Polytechnic	12
38	<i>Debra</i>	1	Girl 1	Part-time	Radio Producer	TV Producer	First Degree	First Degree	3
39	<i>Ann</i>	2	Girl 3 Girl 2	Home	Book Keeping for Husbands Business	Own Building Business	First Degree	First Degree	10
40	<i>Tessa</i>	2	Girl 3 Boy 0	Home	Marketing Manager	Managing Director, Own Graphics Company	First Degree	First Degree	0
41	<i>Jessica</i>	2	Girl 3 Girl 0	Full-time	Research Scientist	Director, NGO	PhD or Several Masters	First Degree	5
42	<i>Jackie</i>	2	Girl 4 Boy 1	Home	Publishing / Translating	Economist, Civil Service	Masters or Similar	Masters or Similar, Oxbridge	5
43	<i>Rachel</i>	1	Boy 3	Part-time	Administrator, Home Based Work	Employee Communications, IT Company	First Degree	No Professional Qualification	10

Continued: Table 4.4: Biographical Data

	<i>Pseudonym</i>	No. of children- ren	Children's Ages & Genders	Mothers Working Hours	Mothers Current or Last Employment	Fathers current employment	Mothers Education	Fathers Education	Years in the Area
44	<i>Madison</i>	2	Girl 9 Boy 4	Part- time	Academic, Historian	Journalist	PhD or Several Masters, Oxbridge	PhD or Several Masters, Oxbridge	8
45	<i>Hanna</i>	2	Boy 2 Girl 1	Part- time	Lecturer	IT Management, Corporate Business	PhD or Several Masters, Oxbridge	Masters or Similar, Oxbridge	4
46	<i>Judy</i>	3	Girl 12 Boy 10 Girl 4	Part- time	Lecturer	Criminal Lawyer, Own Practice	PhD or Several Masters, Oxbridge	First Degree, Oxbridge	15
47	<i>Mia</i>	2	Boy 10 Boy 7	Part- time	Administration, NGO	Role not clear, NGO	First Degree	First Degree	18
48	<i>Denise</i>	1	Girl 3	Part- time	Freelance Writer & Illustrator	Fund Manager, City	First Degree	First Degree, Oxbridge	0
49	<i>Elsa</i>	3	Girl 4 Girl 1 Boy 1 (twins)	Home	Administration, Local Authority	Project Manager, Charity	First Degree, Oxbridge	First Degree, Oxbridge	5
50	<i>Abby</i>	2	Girl 3 Boy 0	Part- time	Architect	Architect	Masters or Similar	First Degree, Oxbridge	0
51	<i>Connie</i>	3	Girl 8 Girl 5 Boy 3	Part- time	Drama Teacher	Senior Academic & Medical Professional	First Degree	PhD or Several Masters	8

Continued: Table 4.4: Biographical Data

	<i>Pseudonym</i>	No. of child-ren	Children's Ages & Genders	Mothers Working Hours	Mothers Current or Last Employment	Fathers current employment	Mothers Education	Fathers Education	Years in the Area
52	<i>Nicole</i>	1	Boy 0	Full-time	Head of Department, Big Media Company	Own Business Consultancy	Masters or Similar	Masters or Similar	0
53	<i>Vanessa</i>	1	Girl 0	Part-time	Magazine Editor, Voluntary Sector	Journalist	First Degree	First Degree	10
54	<i>Angela</i>	2	Boy 3 Girl 1	Home	Manager, Charity	Charity Fundraiser	First Degree	First Degree	5

## Notes :

Part-time varies from a few hours of free lance work to 0.8 employment  
 Universities attended are 'old universities' unless otherwise stated. However, we have also indicated where qualification comes from Oxbridge.  
 We have grouped educational qualifications in the following way: Professional diploma (any post compulsory professional qualification that was gained through courses not classifies as university degrees college, polytechnics or in-house training leading to a recognised qualification), Masters or similar (any post-graduate of duration one year, such as MA, MSc, MBA or teaching qualification), PhD or several masters (where parent had a PhD or alternatively two or more post-graduate qualifications).

## 5 Education and Social Selection in Italy\*

*Roberto Fini*

### INTRODUCTION

The aim of this chapter is to examine the evidence regarding education and social selection in Italy. In particular, it focuses on two central hypotheses in the theoretical and socio-political debate:

- That there is a strong relationship between the main socio-economic indicators used to define the material well-being of persons (income, wealth, expenditure, etc.) and the level of education attained, i.e. that, as the level of formal education attained rises, so too does the level of material well-being;
- That there seems to be a strong direct correlation between the level of formal education attained by parents and that attained by their children, with the result that the children of parents with low levels of formal qualifications are more likely to attain low levels of qualifications themselves, compared with the children of parents with higher levels of qualifications.

#### *The Italian education system*

Before examining the themes proposed in this introduction, let us begin by presenting an overview of the Italian education system as it exists at the time of writing<sup>1</sup>. Education is compulsory for children aged six to fourteen years with eight years of compulsory attendance. Compulsory schooling includes five years of primary school (ISCED 1)<sup>2</sup> and three years of junior secondary school<sup>3</sup> (ISCED 2)<sup>4</sup>.

More than 80 per cent of those who attain their junior secondary school certificate continue their studies, enrolling in one of the streams or sites in which senior secondary schooling is delivered<sup>5</sup> (ISCED 3/4<sup>6</sup>), for a period of five years. This level of schooling involves:

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\* Translated from the Italian by John Polesel.

1 There are in fact reforms of senior secondary schooling under way. However it is possible neither to give a timeline for their introduction nor to determine whether they will actually be implemented.

2 In the ISCED 97 definitions, this level is defined as primary school.

3 In the ISCED 97 definitions, this level is defined as lower secondary education.

4 Junior secondary school is comprehensive (non-tracked).

5 In the ISCED 97 definitions, this level is defined according to the range of tracks or streams comprising Level 3. Level 3 (secondary general education) comprises the majority of senior

- a. *Liceo Classico, Liceo Scientifico*<sup>7</sup>: humanities or science senior high schools delivering general or academic education.
- b. *Istituti Tecnici*: technical senior high schools, further sub-divided into industrial and commercial types. The former focus on technological skills, the latter on economics/management skills. These are the largest sector in senior secondary education and have a strongly vocational orientation.
- c. *Istituti Professionali*: vocational senior high schools, characterised by a strong orientation towards work. Their programs are usually terminal.
- d. Artistic education: offered in artistic senior high schools and artistic senior vocational schools.

Post-secondary education (ISCED 5,6,7) consists of:

- a. Non-university tertiary education (ISCED 5B)<sup>8</sup>;
- b. University education (ISCED 5A<sup>9</sup>): university education comprises a three-year qualification leading to a basic degree (*laurea di primo livello*), with the option of a further two years leading to a specialised degree (*laurea specialistica*);
- c. Higher degree university education (ISCED 6), comprising the research doctorate<sup>10</sup>.

#### *Characteristics of educational levels in Italy*

Italy has recorded significant improvements in its levels of educational participation. This trend, initiated in the 1960s with the raising of the compulsory schooling age to 14, has allowed Italy to achieve participation levels for its youngest cohorts which are comparable to those of other OECD countries, as can be seen in Tables 5.1 and 5.2.

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secondary schools, particularly the Liceo, Istituto Tecnico and the Istituto Professionale. Level 3B comprises the Liceo Artistico (Art High School) and Level 3C comprises the Conservatorio Musicale (Music Conservatory), the Accademia di Danza (Dance Academy) and some other schools.

6 Level 4 of the ISCED 97 scale is largely absent from the Italian system. It comprises one-year vocational programs open to students who have attained the senior certificate pertaining to Level 3 programs.

7 In addition to other types of Liceo of an experimental nature.

8 This category comprises one-year courses. These are rare in Italy and have met with little success.

9 These are the most common tertiary studies and comprise mainly Level 1 three-year undergraduate degrees and Level 2 Masters-level studies.

10 In the ISCED 97 definitions, this level is defined as doctoral studies. Recently, Masters programs have become commonly available in Italy, although they do not have full legal status as postgraduate courses.



Table 5.1: Italy - Proportion of Population Attaining Qualification Levels by Age and Year of Survey

Qualification	1981					1991			2001						
	6-18	19-44	45-64	65+	<b>Total</b>	6-19	20-44	45-64	65+	<b>Total</b>	6-19	20-44	45-64	65+	<b>Total</b>
University degree or diploma	0.0	4.7	3.1	1.6	<b>2.8</b>	0.0	6.1	4.0	2.4	<b>3.8</b>	0.0	9.9	8.5	3.4	<b>6.6</b>
Senior certificate or VET	1.4	23.3	6.8	3.7	<b>11.5</b>	5.5	34.7	11.6	5.6	<b>18.6</b>	5.3	46.7	23.3	8.0	<b>26.3</b>
Junior secondary	32.7	31.3	13.4	7.7	<b>23.8</b>	42.1	40.4	20.3	10.7	<b>30.7</b>	36.2	37.7	30.0	13.2	<b>30.6</b>
Primary or no qualification	65.9	40.7	76.7	87.0	<b>61.9</b>	52.4	18.8	64.1	81.3	<b>46.9</b>	58.5	5.7	38.2	75.3	<b>36.5</b>

Source: ISTAT, Annuario statistico italiano 2003, Roma, 2003; ISTAT, 13° Censimento generale della popolazione 1991, Roma, 1995

Despite this trend, which must be seen as a positive development, especially in relation to the low starting levels, the growth in educational levels has not been independent of the influence of social origins and has therefore not played a major role in the democratisation of Italian society. This aspect of the debate is an important focus of this chapter.

Table 5.2: Education indicators in OECD countries, 2001-2002

Country	Education aspirations	Education participation rates 15-19	Completion rates	
			Senior	Tertiary
<i>Austria</i>	15.9	76	-	14.2
<i>Belgium</i>	18.7	91	-	-
<i>Denmark</i>	17.8	80	-	-
<i>Finland</i>	18.7	85	87	18.4
<i>France</i>	16.5	86	84	13.2
<i>Germany</i>	17.2	88	91	13.1
<i>Greece</i>	16.1	87	58	-
<i>Ireland</i>	15.9	80	74	1.2
<i>Italy</i>	<b>15.8</b>	<b>71</b>	<b>75</b>	<b>16.6</b>
<i>Luxembourg</i>	-	74	66	-
<i>Netherlands</i>	17.2	87	-	-
<i>Portugal</i>	17.0	76	-	-
<i>United Kingdom</i>	18.9	73	-	-
<i>Spain</i>	17.5	80	61	-
<i>Sweden</i>	20.2	86	75	1.2
<i>Other OECD</i>				
<i>Canada</i>	16.5	74	-	7.1
<i>United States</i>	16.7	74	74	13.3
<i>Australia</i>	20.7	82	-	7.1
<i>Japan</i>	-	-	94	27.2

Notes:

For the tertiary participation rate, the age category of 19-23 was used for Denmark, Finland, Germany, Italy and Sweden, 17-21 for Ireland and 18-22 for the remaining countries. The data relate to levels 5A and 6 on the ISCED scale.

Source: ISTAT, Annuario statistico italiano 2002, Roma, 2003

*The reasons for continuing in post-compulsory education*

The role of education in promoting social mobility is supported by evidence from a considerable body of literature; this field of study was opened up in the 1960s and has more recently achieved a richer conceptual basis through studies on the conditions for internal growth (*crescita do cosa*). The conditions within which the educational system operates are crucially important in determining its effectiveness and its ability to develop processes which can oppose the “natural” distribution of income and wealth.

This chapter examines empirically the effectiveness of the Italian education system in relation to access to education, especially at the higher levels (senior secondary education and university)<sup>11</sup>. It should be said that the existence of benefits to individuals who progress beyond the compulsory leaving age provides evidence of the economic incentives to remaining in study<sup>12</sup>.

If, in theory, there were no economic obstacles, as human capital theory (e.g. Becker 1975) presupposes, everyone should be able to make use of these opportunities, deciding what level of education to attain, based on their own individual preferences. This scenario would equate to the “equality of access” which liberal theorists (amongst others) prescribe as the necessary and sufficient conditions for ensuring the equity of the scholastic system<sup>13</sup>. Each individual maximises his or her potential, given the constraints of their financial position.

If there were no barriers in the credit market, individuals from poorer families, who cannot depend on their own or their families’ resources to remain in study, could enter into debt to finance their education to the level at which the cost of the incurred debt was less than the expected benefit from human capital improvement<sup>14</sup>.

The absence of barriers in credit markets is, as noted, purely theoretical, but even if actual conditions approached this, the literature suggests that individuals’ choices in the educational field are not determined solely by external conditions, but are formed through a process of socialisation, in which the family is the primary agent. In other words, the individuals most attuned to the cultural demands of school are the children of the most highly educated parents, and the most forward-looking individuals are the offspring of the wealthiest families. To this we add the crucial

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11 The reason for focusing on these two levels is that while it is easy to find consensus regarding the collective benefits of primary and junior secondary schooling (corresponding to participation to the age of 14), the setting of compulsory participation targets for senior secondary and tertiary education, is subject to much greater debate.

12 Here we may refer to the seminal contribution of Becker (1975).

13 Recently the Minister of Education, L. Moratti, affirmed, “We can have a range of views as to the means and processes for achieving reform of the education system, but in the final outcome we must recognise that schools should focus primarily on the development of the individual, affirming the universal truth of the right to an education” (11 February 2003). This is no doubt a commonly held view and the affirmation of “the universal truth of the right to an education” is certainly a necessary condition, but is not in itself sufficient.

14 This does not necessarily mean that everyone should attain the same level of education: more far-sighted individuals or those with a greater love of culture will attend school longer than those with limited goals for example or who are more interested in sporting activities.

observation that the richest families are also less averse to the risk of investing in the education of their own children<sup>15</sup>.

If these observations are correct, then equality of opportunity is only one of the influences on educational participation. This means that equality of opportunity should be seen in terms of “independence from family background”. It is only if the educational choices of a generation were not influenced by those of the previous generation that we could truly consider individuals free to choose to attain the same level of education they would have chosen had they been born in a different family.

The motivation for this chapter is the fact that the ideal situation implied by the absence of credit market imperfections and family and environmental influences does not exist in our country. In fact there is considerable evidence to the contrary.

### *The relationship between educational qualifications and income*

Let us examine the first of the two problems posed in the introduction: economic circumstances are strongly correlated to level of educational qualification attained. This may seem obvious, but the fact that common sense aligns with the empirical evidence reinforces its importance; moreover a brief examination of this fact serves to introduce the second of the issues cited above. The statistical source used here is the “Survey of Family Finances” conducted every two years by the Bank of Italy which represents one of the more reliable of the available data sources<sup>16</sup>. The first set of data to consider is that relating to the benefits arising from qualifications. This presents no surprises; as level of qualification rises, so too does family income (Figure 5.1).

It should be noted that every extra year of study results in just under 1000 euros of extra income per year, but the greatest rise occurs in the transition from no qualification to primary school completion (1323 euros for every extra year of study) and in the subsequent transition from junior secondary school (983 euros for every extra year). The decision to complete the senior school certificate results in a lesser gain of only 696 euros. With a degree one returns to higher gains (917 euros)<sup>17</sup>.

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15 This is because the cost of opportunity burden they incur by deciding to invest in education is less for them.

16 The data reported here refer to the 2004 edition of this study which reports the data relating to 2002. The questionnaire on which the survey is based was administered to a sample of approximately 8,000 families of which half participated in the survey for the first time. The complete study is available at [www.bancaditalia.it](http://www.bancaditalia.it).

17 Naturally these are hypothetical figures since the Italian system is structured “in parcels”, so that participation at a particular instructional level for many years without gaining the corresponding qualification represents the complete loss of the investment as there is no legal recognition of scholastic credits.

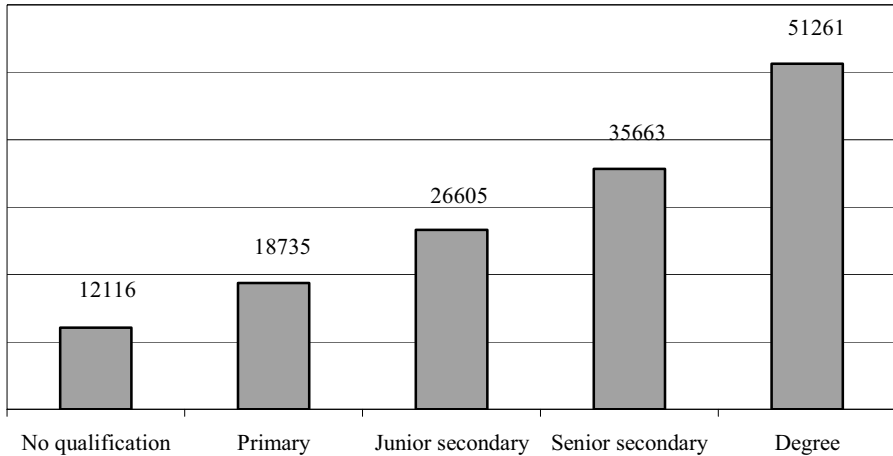


Figure 5.1: Return on qualifications (in euros), 2002

Note: The income benefits from a degree qualification are approximately four times higher than those from no qualification.

Income is also related to spending, and it can be seen that low family income is associated with higher rates of necessary spending<sup>18</sup>; and since income is positively correlated with level of qualification, it can be argued that those with lower levels of qualifications have higher rates of necessary spending. This in effect is the message which can be drawn from Table 5.3.

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18 That is spending on essential rather than discretionary items. Let us remember that the propensity to necessary spending ( $c$ ) is expressed in the relationship between level of income ( $Y$ ) and spending of that income ( $C$ ) in the formula  $c=C/Y$ . Economists will note that, all other conditions being equal, the lower the income the higher is the proportion of that income which needs to be spent. Thus a high value for the figure denoting propensity to spend is indicative of a lifestyle which is characterised by low income and the inability to put aside income as savings.

Table 5.3: Family income, family spending and rate of spending by head of family's education level

Qualification level	Family income	Family spending	Rate of necessary Spending
<i>None</i>	12.116	9.905	81.8
<i>Primary school</i>	18.735	14.605	78.0
<i>Junior secondary</i>	26.605	20.027	75.3
<i>Senior secondary</i>	35.663	25.274	70.9
<i>Degree</i>	51.261	32.196	62.8

In other words, those with lower levels of qualifications are forced to allocate between three-quarters and four-fifths of their income to spending, while those with higher levels of qualifications (senior school certificate or degree) spend a lower proportion of their income on essentials.

Another interesting statistic may be derived from the analysis of the distribution of families by level of income and level of qualification of the main breadwinner (see Table 5.4 where the bold type shows the income category with the highest share of families at each qualification level). This illustrates the relationship between qualification level and income level.

It is therefore evident that family background is an important determinant of the educational outcomes of young people. Notwithstanding the fact that there may be many individual exceptions to this rule, it cannot be denied that the economic conditions of families have a strong impact on scholastic choices, whether these relate to continuation at the post-compulsory level, the type of senior secondary school entered or the timeframe within which qualifications are achieved (Gasperoni 1996).

Moreover, there seems to be a strong direct relationship between the level of a father's schooling and the level achieved by his son as shown in Table 5.5.

Table 5.4: Distribution of families by income category and head of family's education level

<i>Income category in 1000s of Euro</i>	<i>Education qualification</i>				
	<i>None</i>	<i>Primary</i>	<i>Junior secondary</i>	<i>Senior secondary</i>	<i>Degree</i>
up to 5	6.3	2.9	2.7	0.7	1.3
from 5 to 7.5	16.5	5.2	1.3	0.4	0.3
from 7.5 to 10	<b>23.4</b>	10.2	4.3	1.3	0.9
from 10 to 12.5	16.7	13.0	4.5	3.1	0.9
from 12.5 to 15	15.2	<b>13.9</b>	8.0	3.8	2.0
from 15 to 17.5	6.5	10.8	9.1	6.5	5.3
from 17.5 to 20	4.8	8.9	8.0	5.1	1.8
From 20 to 22.5	3.7	8.1	8.0	5.8	2.4
from 22.5 to 25	2.6	6.3	7.4	5.2	2.8
from 25 to 30	1.9	9.0	<b>14.6</b>	12.1	8.0
from 30 to 35	0.8	4.3	11.0	11.6	7.7
from 35 to 40	0.2	2.0	7.6	12.0	11.9
above 40	1.3	5.3	13.7	<b>32.1</b>	<b>54.9</b>

Table 5.5: Correlation between father's level of schooling and son's level of schooling (Italy 1998 – percentage values)

Children \ Fathers	None	Primary	Junior secondary	Senior secondary	Degree and above	Total fathers
None	19.22	48.20	21.02	10.05	1.50	30.37
Primary school	1.34	23.97	35.90	33.04	5.75	48.45
Junior secondary	0.40	5.31	21.65	57.24	15.41	11.10
Senior secondary	0.00	2.39	11.35	54.38	31.87	7.40
Degree and above	0.55	0.55	3.30	31.32	64.29	2.68
Total children	6.54	27.03	27.11	30.28	9.04	100.00

Source: Banca d'Italia data, Italian family finances survey, 1998<sup>19</sup>

Data provided by the Bank of Italy show a significant rise in the level of qualifications achieved in the last thirty years, in line with the data shown above. While a third of the fathers in the survey had no qualifications at all and nearly half (48.45 per cent) had not continued beyond primary school, nearly a third (30.28 per cent) of their sons held a senior school certificate at the time of the survey.

Another notable point is the significant positive correlation between the qualification levels of the two generations<sup>20</sup>. Having a father with a degree gives a young person a two in three chance (64.29 per cent) of also gaining a degree, while for young people with fathers who have no qualification the chances are 1.5 in one hundred<sup>21</sup>.

19 Owing to differences in data collection methodologies introduced over time it was not possible to include more recent data. For the 1998 survey, the panel of families sampled comprised 6784 individuals. The average age of the heads of family in the table was 44, while that of their fathers (in theory, given that they could be already deceased at the time of the survey) was 77.

20 Analysing the data using appropriate statistical tests (in particular the Kendall tau-b test which allows the measurement of independence between variables) there was found to be a significant correlation between the academic choices of sons and fathers. In the case of the Kendall test which reports the correlation between two variables within a range of -1 (no correlation) to +1 (complete correlation), the value was found to be 0.52; the correlation is therefore positive in value and significant.

21 The odds-ratio, that is the relationship between these two probabilities, attains the significant value of 42.8. This means that the son of a degree holder is nearly 43 times more likely to attain a degree than the son of a parent with no educational qualification.



### *The role of self-selection in educational outcomes*

Our analysis turns now to the role played by two institutional mechanisms which characterise the education system in Italy:

- The tracking of students at senior secondary level, notably into academic, technical and vocational schools;
- The presence of a non-marginal system of private education.

In the absence of institutionally mandated mechanisms of selection in Italy, the argument might be made that self-selection explains the level of social stratification which occurs in education. This argument is all that much stronger when one considers the (theoretical) equality of access to all levels of education in Italy<sup>22</sup>.

As we have noted, this chapter has two main components. In the first, empirical evidence of the influence of social and family background on educational outcomes is presented. In the second, we will attempt to present some lines of argument arising from an analysis of the data.

### *The role of tracking*

In considering the institutional characteristics of the Italian secondary education system, it is not enough to note that there are significant differences between the various tracks or streams, at least in a formal sense. It must be remembered that since 1969, there has been unfettered access to all university faculties regardless of the type of senior secondary school attended.

Let us begin with some data relevant to this view. The survey data reported in Table 5.6 point to a strong tendency towards self-selection into various types of senior secondary schools based on students' prior academic achievement, as expressed in the appraisals obtained at the end of junior secondary schooling.

In effect, students with better appraisals orient themselves primarily towards academic senior high schools (*licei*), while those with poorer appraisals orient themselves more towards technical senior high schools (*istituti tecnici*)<sup>23</sup>. Let it be made clear that there is no legal or institutional obligation to enrol in one type of school rather than another and thus the process of choice outlined in Table 5.6 is entirely attributable to self-selection.

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22 It should be noted that this kind of reasoning can have important implications for the debate concerning the introduction of school vouchers, which should, according to those who support their introduction, increase the choice of families, thus increasing the equality of the initial starting point. In reality, the availability of vouchers risks having no effect on equity of access to scholastic progression, if at the same time measures are not also introduced to attenuate the factors which foster the processes of self-selection among families and to make the learning pathways which typify the Italian secondary school system more flexible.

23 It should be noted that, as the sample consisted of students in their final year of senior secondary school, it does not by definition include those who dropped out of school in the preceding years, of whom there is a higher proportion in the technical schools. Given the reasonable assumption that the probability of early leaving will be negatively correlated with the quality of the appraisal obtained at the end of junior secondary school, the model of differential access to senior secondary education may in fact be even more polarised than appears when seen from the perspective of the end of the senior secondary schooling phase.

Table 5.6: Distribution of respondents by type of senior secondary school and final appraisal received at the end of junior secondary school (percentage values)

Appraisal at end of junior secondary school	Industrial technical schools	Commercial technical schools	Scientific high schools	Humanities high schools	Total
Satisfactory	33.87	25.6	4.31	4.49	15.84
Good	36.34	38.3	18.28	15.00	26.18
Very good	18.91	24.38	29.79	28.12	25.68
Excellent	10.87	12.53	47.63	52.39	32.30

Source: Data supplied by the Istituto Cattaneo

The 1969 reform of university entrance procedures might have been expected to significantly reduce levels of social stratification, yet it has often been stated that in the education system there are hidden processes which in fact have made it much more selective since that time resulting in rigid social segregation of educational outcomes, and consequently of labour market outcomes. Unfortunately, there are insufficient longitudinal data to support this theory, only sample surveys which nevertheless provide evidence of the substantially selective nature of the Italian education system<sup>24</sup>.

However, as shown in Table 5.7, apart from the influence of appraisals obtained in the previous scholastic cycle, students in the study seem to self-select into the various types of senior secondary schools on the basis of the occupational status and educational qualification of their parents.

We can infer from an analysis of Table 5.7 that:

- The offspring of labourer fathers and housewife mothers, with predominantly junior secondary qualifications only, are typical of the students enrolled in technical schools (*istituti tecnici*);
- The offspring of white collar and professional fathers, with mothers who are teachers, with senior secondary or university level qualifications, are typical of the students enrolled in academic high schools (*licei*).

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<sup>24</sup> Here we refer to a study conducted by the Istituto Cattaneo of Bologna in the 1992-93 academic year, reported in Gasperoni (1996). The data are not recent but in the absence of significant changes in the legislative framework it is reasonable to suppose that little has changed in the last decade. The sample comprised 6457 students enrolled in the final year of senior secondary school in four streams (humanities high school, scientific high school, commercial technical school, industrial technical school), from a total of 23 Italian provinces and 92 schools involved in the study. In each school, four final-year classes were selected, from which students were administered a test to ascertain their level of scholastic achievement. Although the objective of the study was to measure achievement and its relationship to the type of school attended, the questionnaire also collected information on the academic and family background of the students, making it particularly useful for the purposes of this chapter.

Table 5.7 (a): Distribution of respondents by type of senior school attended and parents' work status (percentage values)\*

	Industrial technical schools		Commercial technical schools		Scientific high schools		Humanities high schools		Total	
	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Father	Mother
<i>Domestic Duties</i>	0.00	49.68	0.06	46.01	0.00	31.7	0.00	27.88	0.06	38.11
<i>Worker **</i>	35.64	17.64	25.18	12.34	9.00	4.64	9.57	4.31	18.88	9.26
<i>Primary producer</i>	1.83	2.19	1.25	1.43	1.31	0.76	1.00	0.30	1.33	1.12
<i>Skilled trades ***</i>	11.65	3.04	8.67	2.56	5.62	1.85	3.78	1.78	7.20	2.26
<i>Shopkeeper ***</i>	6.07	5.30	10.04	7.36	6.93	5.57	7.09	5.50	7.55	5.92
<i>White collar worker</i>	33.03	15.81	34.91	21.45	37.04	25.91	30.42	22.39	33.94	21.72
<i>Teacher</i>	1.76	3.95	1.50	5.30	9.33	24.77	10.75	31.54	6.14	17.24
<i>Manager</i>	3.53	0.14	5.99	0.50	13.64	1.42	14.18	1.36	9.71	0.90
<i>Professional</i>	4.66	1.34	8.17	2.37	13.75	2.67	19.96	4.25	12.02	2.72
<i>Entrepreneur</i>	1.20	0.28	3.30	0.44	3.00	0.55	2.78	0.47	2.63	0.44

Notes:

\* Columns do not sum to 100 due to missing responses

\*\* The "worker" category includes: labourer, hired worker, domestic worker, tenant and factory worker.

\*\*\* The "skilled trades" and "shopkeeper" categories include with and without staff

Source: Data supplied by the Istituto Cattaneo

Table 5.7 (b): Distribution of respondents by type of school attended and parents' qualifications (percentage values)\*

Qualification	Industrial technical schools		Commercial technical schools		Scientific high schools		Humanities high schools		Total	
	Father	Mother	Father	Mother	Father	Mother	Father	Mother	Father	Mother
None	1.62	2.75	1.12	2.24	0.44	0.38	0.30	0.47	0.82	1.37
Primary	28.72	38.53	26.43	34.91	8.24	11.51	7.03	9.69	16.82	22.62
Junior secondary	41.92	38.67	36.53	36.16	23.08	24.17	18.96	18.67	29.39	28.82
Senior secondary	25.55	18.35	29.93	24.31	42.12	44.35	36.09	43.18	33.99	33.51
Degree	1.91	1.41	5.55	2.24	25.70	19.26	37.27	27.88	18.60	13.46

Notes:

\* Columns do not sum to 100 due to missing responses

Source: Data supplied by the Istituto Cattaneo

A further indication of the link between educational outcomes and family background can be seen in the relationship between the kinds of appraisals obtained by students at the end of junior secondary schooling and the educational qualifications of their parents; in effect, there is a strong relationship between the two variables, as seen in Table 5.8.

*Table 5.8: Distribution of respondents by parents' qualifications and final appraisal at the end of junior secondary school (percentage values)*

Parents' qualifications	Appraisal of students			
	<i>Satisfactory</i>	<i>Good</i>	<i>Very good</i>	<i>Excellent</i>
<i>Both with no qualification</i>	30.00	45.00	5.00	20.00
<i>At least one with primary school</i>	22.27	34.67	22.93	20.13
<i>At least one with junior secondary school</i>	20.89	30.91	25.62	22.58
<i>At least one with senior secondary school</i>	15.14	24.15	26.30	34.42
<i>At least one with a degree</i>	9.61	22.49	27.62	40.28
<i>Both with a degree</i>	4.41	14.43	24.28	56.88
<i>Total</i>	15.83	26.16	25.66	32.36

Source: Archives of the University of Milan

If the compulsory years of schooling could compensate entirely for pre-existing cultural gaps at the family level (and thus achieve a theoretical decoupling of educational outcomes from family background), the distribution of student outcomes at the end of junior secondary school reported in Table 5.8 would be independent of the level of study attained by their parents, as would be expected in theory from a process guaranteeing equal opportunity of access to senior secondary schooling.

The means by which social stratification is produced in Italy then encompasses four main elements:

- a. the level of schooling attained by parents
- b. the social status of parents
- c. the type of senior secondary school attended
- d. the ability of the individual student

These elements interact in complex ways:

- a. the level of parents' schooling influences the choice of senior secondary school and the level of financial resources available for education;

- b. the occupational status of parents influences more generally the financial resources available to families and therefore the capacity to finance widely differing periods of time in study<sup>25</sup>;
- c. social status determines parents' expectations of students and this in turn tends to be reflected in the intensity of the pressure towards scholastic commitment placed upon them;
- d. the innate ability of individual students also intervenes to influence their scholastic achievements<sup>26</sup>.

It is worth adding a further aspect. The educational achievements of students at each level of education may also reflect the quality of their learning environment, which can attenuate the influence of family background. This situation may occur at random, for example when a student is part of a particularly brilliant teacher who is able to motivate students and stimulate intellectual curiosity<sup>27</sup>, or by virtue of well-advised decisions on the part of parents to enrol students in courses and schools with a good reputation.

### *The peer effect*

It is therefore evident that the choice of senior secondary school and its outcomes are tied to a process of self-selection based on a number of factors which we will re-iterate:

- a. achievement in junior secondary school<sup>28</sup>;
- b. family background<sup>29</sup>.

To these factors may be added the role played by peer effect, that is by imitative dynamics, towards higher or lower achievement, which begin in the group and which appear to influence, often significantly, the performance of individual students. The peer effect has been noted in many empirical studies and is supported

25 Checchi (2000) argues that the economic benefits of a senior secondary certificate from a Liceo, without further university studies, are less than those of a senior certificate obtained from a technical school. Families selecting an academic senior high school (liceo) foresee an extended period of study before them (5 years in senior secondary school and at least 3 years at university), while those who choose a technical senior high school expect no more than the 5 years needed to obtain the secondary certificate. All other things being equal, if a family's financial constraints are considerable, choosing an academic senior high school will prove difficult, if not impossible.

26 It may be observed that, while we cannot ignore the influence of this factor, we must acknowledge that it acts *coeteris paribus*. In other words, a talented student from a poor family, with parents who have a low level of education and little interest in an academic career for their children, will have greater difficulties following such a pathway than a similarly talented student from a wealthier family, with parents who have degrees and who are interested in their academic career.

27 Let us point out in relation to this that classroom climate is not in fact a random variable, depending almost always on the strategies adopted by schools and on the teachers in the classroom. The randomness to which we refer relates to the fact that the student discovers these elements only "a posteriori" after the scholastic choice is made.

28 In practice, the appraisal they receive at the end of junior secondary school.

29 Defined in relation to occupational and/or educational level of the parents.

by a vast (if inconclusive) theoretical base. Moreover, it is not possible to quantify its effect on student outcomes precisely, but it is certainly a promising avenue of investigation.

Attention to peer effect factors is justified by the fact that it could explain the link between two variables cited above: if parents ascertain that the most talented students are concentrated in the academic senior high schools (*licei*) and are aware that the academic achievements of their children may be influenced by the success of their peers, then they will tend to enrol them in these schools (*licei*), provided that they believe their children capable of completing their academic senior secondary studies and that their financial circumstances allow them to consider the possibility of subsequent study at university. By means of this process, the differences in educational opportunities could well persist from generation to generation despite the predominantly public financing of the education system and formal equality of access.

### *Public and private schooling*

Linked to this, there is another factor which may influence the level of stratification in Italian schools: the presence in the system of public and private schools<sup>30</sup>. Parents can choose the characteristics of the school in which they enrol their children, particularly with respect to the other students who enrol there and who will be their children's classmates. This choice includes not only school type (academic or vocational), but whether a school is private or public.

This fact has received considerable attention in the literature<sup>31</sup>, particularly with respect to its policy implications: the choice between enrolling in a public or private school is typically associated with the freedom of parents to invest their family resources in the education of their children. In this respect, parents might believe that a private school, because of its fees, selects a better quality of students and therefore might have a positive peer effect on their own children.

There is, however, a question mark over the quality of education provided by private schools. The fact that the private sector is subject to market forces and that each private school must compete with every other private and public institution may result in those schools seeking to maximise efficiencies in their operation<sup>32</sup>, without necessarily guaranteeing the highest levels of educational standards.

To test various hypotheses regarding the behaviour of parents and students in relation to private schools we cannot refer to the research conducted by the Istituto Cattaneo, as its sample frame did not include private schools. However an

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30 There are few private schools in Italy. Only slightly more than 10 per cent of all students in senior secondary school are enrolled in private schools. Although this represents some growth over recent years, the importance of this sector remains marginal.

31 See Stiglitz (1974) and Glomm and Ravikumar (1992).

32 Private school management could thus be focussed on maximising cost savings rather than educational quality.

alternative source is a study of students enrolled in the University of Milan in the 1999/2000 academic year<sup>33</sup>.

The relevant statistics are those regarding the distribution of enrolments in the University of Milan according (a) distribution of enrolments from each sector by program type of schooling (Table 5.9), and (b) distribution of enrolments from each program type by administrative sector of schooling (Table 5.10).

*Table 5.9: Share of University of Milan enrolments from different administrative sectors by program type of schooling (column total) – 1999-2000 academic year*

<i>Program type</i>	State	Public non-state	Private	All sectors
<i>Vocational school</i>	6.5	5.5	6.6	6.5
<i>Technical school</i>	23.5	19.7	12.0	21.7
<i>Academic high school</i>	64.4	71.6	74.6	66.0
<i>Other types of school</i>	5.7	3.2	6.8	5.8
<i>Total</i>	100	100	100	100

*Table 5.10: Share of enrolments from different program types of schooling by administrative sector (row totals) – 1999-2000 academic year*

<i>Program type</i>	State	Public non-state	Private	All sectors
<i>Vocational school</i>	83.6	1.2	15.3	100
<i>Technical school</i>	90.4	1.3	8.3	100
<i>Academic high school</i>	81.5	1.5	17.0	100
<i>Other types of school</i>	81.7	0.8	17.5	100
<i>Total</i>	83.6	1.4	15.0	100

Source: Archives of the University of Milan

33 We are aware of the limits imposed by this choice. On the one hand the data are not recent, on the other hand they present a partial view. Nevertheless we believe that the conclusions which can be drawn from these data can be generalised sufficiently. The choice of these data is made necessary by the lack of official statistics relating to the entire Italian student population. The sample comprises 64,090 students enrolled at the University of Milan, for whom personal data are available (age, sex, place of birth, place of residence), data relating to family background (number of family members, net income, real estate held in the 1998 financial year), data relating to academic career (type of senior secondary school attended, senior certificate results, university course selection, number of examinations passed at time of survey, average grades attained). The relationship between these data overall and information on senior secondary school attended (public or private) allows an analysis of the impact of sector on the academic performance of the student. To eliminate “noise” produced by the presence of students who are not on schedule for completing, students enrolled before 1995/96 have been excluded from the sample. Unfortunately this reduces the sample size to little more than half its original size, but on the other hand the bias produced by the students who are behind schedule would have been too great to ignore. An additional aim of the study is to examine the persistence of peer effect on university studies.



At a descriptive level, the first point to note is the preponderance of students from academic senior high schools (*licei*) compared with other kinds of schools. This is not surprising: in Italy the academic senior high schools are traditionally considered the pathway to university, while the technical schools (and even more the vocational schools) are mostly considered by students and by their families to be “terminal track” schools providing direct access to the labour market<sup>34</sup>. In fact, not many more than one-quarter of Italian students enrol in the *liceo* (28.2 per cent), but two-thirds (65.99 per cent) of enrolments at the University of Milan are from a *liceo* background.

Another inference which may be drawn from the University of Milan data relates to students’ final school results; students from private schools record a lower result (approximately 2 per cent)<sup>35</sup> and a higher family income (approximately 20 per cent) than students in public schools. The subsequent university outcomes are similar for the two groups in terms of exams passed, but the students from public schools obtain better average results.

The information which can be drawn from this study and the rich administrative data available from the University of Milan allow a detailed analysis of the factors associated with better university outcomes<sup>36</sup>. The analytical objective being pursued here is to ascertain the relative influence of school type on university outcomes, partly to be able to speculate on the presence or absence of peer effects<sup>37</sup>.

The most relevant facts seem to be the following:

- a. the outcomes of university are negatively influenced by having attended a private school:
  - a.1. all other things being equal, the average grade attained by private school students is around 2 percentage points lower than that attained by public school students;
  - a.2. all other things being equal, the average number of university exams per year passed by private school students is approximately one-third lower than the average number passed by public school students.
- b. attending a school frequented by wealthier students
  - b.1. is in general associated with a higher average mark in university exams.

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34 As already emphasised, enrolment in any five-year course of study in senior secondary school allows access to university. This does not take away from the fact that the choices made by students and their families are generally oriented towards academic high schools for those intending to continue their studies, and towards vocational and technical schools for those not intending to continue their studies after completing their senior certificate.

35 In fact, senior secondary school grades are reported in percentiles and a satisfactory result requires a score of at least 60/100.

36 In contrast with the Istituto Cattaneo data used to analyse enrolments in senior secondary school, the University of Milan database does not include data on the qualifications or occupational levels of parents. Instead, it includes data on family income and wealth, as declared on financial returns and used to assign students to different bands of enrolment.

37 For reasons of brevity, here we recount only the overall results of the survey and not the methodological steps followed to reach these conclusions.

- c. attending a school with higher average examination results has a statistically negligible effect, although
  - c.1. the “neighbourhood” effect depends on the kind of senior secondary school attended: in private schools the peer effect has a positive influence on average senior secondary certificate grades, but has no significant effect in this regard in public schools.

Some tentative conclusions might be drawn from this. We would postulate that the quality of education offered in private senior secondary schools in Italy is marginally lower than that offered in public senior secondary schools. However, private schools also seem to be able to achieve a positive educational benefit by means of self-selection and the peer effect, which in turn have a positive impact on university studies.

### CONCLUSION

What are the conclusions we can draw regarding secondary schooling in Italy? Although the subject is complex and fraught with unknowns, especially because of the absence of statistical data relating to student outcomes, we can propose some hypotheses which the empirical and theoretical researches seem to support. Notwithstanding the formal equality of opportunity inherent in the system, the education system maintains a high level of inequality of outcomes. The persistence of this phenomenon seems to be due to four main causes:

- a. Compulsory schooling seems to compensate only in part for the cultural and family background differences among students; in effect, the quality of the appraisals obtained by students at the end of junior secondary school rises on average with the educational level of their parents and this in turn influences the choice of senior secondary school.
- b. Senior secondary schools are tracked into academic and vocational streams, and since previous schooling does not compensate for social differences, students self-select into senior secondary schooling according to two criteria:
  - a. Previous achievement (as expressed in their junior secondary school appraisals)
  - b. The occupational status and level of qualification of their parents.
- c. Once they are in their specific “track”, self-selection is reinforced by the operation of the peer effect, in that those who find themselves in an academic school (in other words those who have obtained the best appraisals), find themselves with other students of similar backgrounds and attributes and this reinforces their capacity and willingness to learn. Similarly, those who attend vocational schools, other than coming from families with more limited cultural means, in all probability share with their peers a lesser motivation towards study and scholastic enterprise, resulting in a weakening of their educational pathways.
- d. The existence of public and private schools translates into the fact that the most economically advantaged families can enrol their children in a private school and can therefore take advantage of an environment which is

selective in terms of wealth and occupation. This in all likelihood has a positive effect on their ensuing (and highly probable) experience of university and possibly on their labour market experiences.

By means of similar processes which, we emphasise, are not formal but are no less real, the conditions are created by which differences in human capital and the capacity to earn are transmitted from generation to generation with little deviation from the point of departure.

In formal terms, the Italian Constitution guarantees equality of access to education, and this principle is respected by the education system, but individuals within the system find themselves facing very different educational and occupational trajectories. In this context, where a formally equitable system comes up against a reality in which class differences persist, attention needs to be paid to the consequences of the recent introduction of school vouchers in some Italian regions<sup>38</sup>.

In principle, school vouchers allow parents more scope in the choice of senior secondary school for their children and thus allow them to choose the most appropriate pathway for their individual child. However, the advantages arising from the introduction of school vouchers seem to apply only in the cases of "marginal" families, those who would have wanted to enrol their children in a private school but couldn't due to limited financial means.

As has been argued in this chapter, the choice to enrol a child in a private school can be traced back to the desire to benefit from the social self-selection carried out in the scholastic arena resulting in heightened peer effect; improving the conditions for such choice, for example by offering school vouchers, would accentuate the differences in learning rather than reduce them, eventually eroding the conditions for equality in the education system.

The notion that choice improves equality obviously depends on a series of assumptions which can be questioned. First, it requires that private schools not be selective in an academic sense, because if this were so the disparity in average levels of ability between students in public and private schools would increase. Moreover it requires that private schools, faced with a growing demand for their services, not increase the barriers to access (for example by increasing fees) as this would increase segregation based on class, but could have the opposite effect in terms of ability and a propensity to study.

One can however hypothesise that the strong and persistent relationship between scholastic success and differences in social origins could be justified by gains in efficiency in the Italian education system overall. Nevertheless the available evidence does not support the view that private schools introduce competition and therefore contribute to a gain in efficiency; this is also because private schools do not seem able to guarantee an educational experience better than that guaranteed by the public system.

Overall, it seems unlikely that the introduction choice in the form of school vouchers will result in appreciable gains in terms of the collective good. Moreover

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38 Although in very different ways, the regions of Emilia-Romagna, Veneto, Lombardy and Liguria have all introduced school vouchers. In other regions, proposals to introduce them have caused heated debate.

the availability of such vouchers risks worsening the conditions for equal access to education and careers unless other measures are taken to mitigate the effects of social self-selection and to make more accessible the various educational pathways which make up the Italian education system.

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*Jorge Calero*

## INTRODUCTION

The Spanish education system faces a series of major issues in the domain of equity. Some of these are common to European countries, but others are specific to Spain or have a particular acuteness in the Spanish context. Education policies since the 1970s have brought wider and wider sections of the population into the education system, with successive reforms extending compulsory schooling up to 16 years of age. However, despite this progress, levels of access and student achievement in fact remain strongly marked by socio-economic status, ethnicity and region.

The objective of this chapter is twofold. On the one hand, we will review and assess the different factors which contribute to problems of equality in the Spanish education system, and on the other hand examine educational policies and their impact on equity. In a recent review of the Spanish education system undertaken as part of the OECD program on Equity in Education (see Calero 2006a), a set of seven factors were highlighted as especially relevant to equity in education.<sup>1</sup>

1. *Deficiency in the provision of pre-school places.* For 3-5 year-olds, the shortage is in the public system; for younger children (aged 0-2 years), there are too few places in both public and private sectors.
2. *Polarisation of the school system.* There is a growing rift between the network of private establishments which are publicly subsidised (and in which the middle classes 'take refuge') and the public sector of schools which enrolls a very high proportion of immigrant children and low-achieving students. This polarisation is due as much to middle-class educational demand (desire for choice and for superior quality of support services amongst other things) as to a lack of dynamism or responsiveness in the public system to issues of quality and school improvement. This is a process which reinforces unequal patterns of educational failure between different social groups.
3. *Access to post-compulsory secondary education is very limited.* This means a 'bottleneck' with implications for different sectors of the economy as well as problems of equity. The participation of low-income and immigrant groups is very low at this level of schooling and as a result in tertiary education as well.

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\* Translated from the Spanish by Richard Teese.

<sup>1</sup> The report of the synthesis prepared by the team of OECD experts can be found in Teese et al. (2006).

4. *The rapid influx of migrants is concentrated in public schools.* The ability of wholly publicly-funded private establishments to select pupils has led to a situation in which in 2003-04 some 79.3 per cent of migrant students in compulsory secondary education were enrolled in the public sector, which on the other hand accommodates only 65.5 per cent of the total student body. It is public schools which are most likely to be located in high migrant reception areas and to be exposed to excessive tensions.
5. *There is a high level of failure at school, concentrated amongst low-income groups.* This is one of the major barriers to access to post-compulsory schooling.
6. *Vocational programs - especially those offered by school - suffer from problems of low prestige and quality.* Participation in vocational studies at school is highly skewed in social terms, and seen in this context, school vocational streams represent low-grade options for 'poor quality' students.
7. *Regional inequalities in education spending.* Policies of educational expenditure in the different regions of Spain - which depend essentially on funding capacity as well as the presence of the private sector - have led in recent years to the emergence of sharp differences in per pupil spending and consequently also in quality. This needs to be seen in the context of the process of territorial decentralisation - progressively implemented over the decade of the 1990s - which has transferred very extensive administrative powers to the regions (Autonomous Communities).

With this general picture in mind, we will look in depth at a selection of the key issues - the first four listed above - and at educational policies which in recent years have tackled these. We will consider in Part 2 below the issues of pre-school provision, public-private tensions, post-compulsory secondary education, and the immigration impact. Part 3 looks at equity policies and broad strategies. Part 4 considers alternatives in the policy domain and possible future directions.

#### FOUR FACTORS OF SPECIAL RELEVANCE TO EDUCATIONAL INEQUALITY IN SPAIN

##### *Pre-primary education*

In recent years there has been an increase in access to pre-primary education that has made participation at this level of education practically universal for children of three years of age or older. But the rate for younger children remains quite low (13.7 per cent). Public provision of pre-school places is limited in respect of children aged 3-5 years (representing 68.3 per cent of all provision), and is much lower with respect to places for younger children (40.7 per cent).

In the last few years the increase in demand for pre-primary education has grown sharply. The factors that have influenced this increase the most have been the rise in the female activity rate in the workforce, changes in the structure of families (weakening family networks), and the increase, since the beginning of the century, of fertility due to the arrival of the immigrant population and a slight recovery in the

fertility of the native Spanish population. The increase in the demand for pre-primary education has created a significant shortfall in quality public places that is distributed very unevenly across Spain, depending not only on the Autonomous Community of residence, but also on provision made by local municipal authorities.

Shortage of pre-school places leads not only to economic losses, but also equity problems. Losses of efficiency are generated by the difficulty that mothers experience in staying in the active working population and on the other hand also by not achieving the likely greater economic performance of children who have benefited from a longer period of schooling (also begun earlier). Equity losses arise from the fact that early exclusion from education impacts more heavily on mothers with low incomes and their children (who are denied further educational opportunities).

The extension of cost-free status to institutions for 3- to 5-year-olds was established in 2002, but economic barriers still block access to younger children. It is at this stage that income differences exercise a big influence over access. Mothers from poorer households are prevented from taking up jobs, when it is precisely this group who most need to obtain a wage. Low access for the youngest children to quality provision through the public system thus constitutes a very salient point in the patterns of educational inequality in Spain.

In Spain there are no specific programs to facilitate access to pre-primary education for children from socio-economically disadvantaged backgrounds. Such programs would represent an especially effective educational investment, inasmuch as schooling at an early age stimulates cognitive skills and tends to reduce school failure later (Heckman, 2000). PISA 2003 results bear this out as they show that those pupils who had attended more than one year of pre-primary education obtained better results in mathematics than those who had not attended (the effect is maintained, although slightly weaker, if the socio-economic background of the pupils is controlled)<sup>2</sup> However, this positive difference in results is not observed for those pupils who have only attended pre-primary education for a maximum of one year (OECD, 2004).

#### *Selection in the subsidised private sector*

The system of agreements that allows private primary and secondary schools to receive public finance in Spain has important quasi-market elements. The financing of private establishments “follows” the choices of the users. Public financing is granted to private schools in the form of a per student allocation in such a way that the cost-free requirement is fulfilled for the family, the remuneration of the teachers is similar in private and public institutions, and finally that the pupil/teacher ratio falls within a specified range. The objective is to ensure a certain level of competition between public and private institutions by placing all on an apparently equal footing.

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<sup>2</sup> In nine of the OECD countries this effect was particularly strong (between a half and one level of proficiency in mathematics - from 30 to 73 points). See OECD (2004: 267).

The regulations governing access to subsidised private schools are meant to prevent 'selection' - to inhibit 'cream-skimming' by the subsidised institutions - and bind both private and public establishments. Nevertheless, in reality selection operates through the play of three factors. Firstly there is the selective location of the subsidised private schools, usually in high-income neighbourhoods. Secondly the formal requirement of gratuity is not always or not completely honoured by many of the subsidised institutions. Finally, irregular admission practices frequently enable subsidised private establishments to keep out children from low-income families. The existence of these irregular methods, such as charging complementary fees or discriminating in matters of access is an open secret.

It has been the middle-classes that have largely benefited from the ability of the subsidised institutions in Spain to select. With different intensity according to Autonomous Community, enrolment in subsidised private establishments has increased in primary and secondary schooling since the middle of the 1990s. This is explained mainly by the search for a "refuge" for the middle-classes in Spanish society reacting to important changes in the education system. Destabilising changes include, on the one hand, the arrival of new immigrant pupils and, on the other, the effects of major educational reform during the 1990s, extending compulsory education to 16 years and retaining children from social backgrounds who traditionally left the education system at 14 years.<sup>3</sup> As a result, it is the public education system which has experienced the greatest pressure of change and has had to carry the greatest weight of reform.

### *Immigration and educational inequity*

A very large increase in the immigrant population occurred in Spain between 1990 (361,000) and 2005 (3.5 million). In 2005 the immigrant population represented 8 per cent of the total population, when it was only 1 per cent in 1991. In recent years Spain has been the European country with the third highest rate of growth of immigration, particularly from 1997 till now. This process has directly affected the Spanish education system, which in the school year 2003-2004 enrolled almost 400,000 foreign students at non-university levels.<sup>4</sup>

The origin of foreign pupils has also changed significantly. Developments since 1995-1996 indicate an ever-greater presence of Latin American pupils, while the proportional presence of pupils from Africa (essentially North Africans) has fallen to 18.8 per cent.<sup>5</sup>

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3 Another factor which can have an effect on growth in demand for private school places is high income elasticity. In a period of sustained growth in incomes (which occurred from the mid-1990s), families tend to spend more money on their children's education.

4 In 2000, through the Organic Law 8/2000, the situation of foreign pupils in the Spanish education system was regularised by recognising that "all foreigners of less than 18 years have the right and duty to education on the same conditions as Spanish nationals, a right that includes access to basic education, free and compulsory, and the award of the corresponding academic qualifications and access to the public system of grants and support".

5 This trend is advantageous to the education system in that Latin American pupils, speaking Spanish, obtain better results at school than the average foreign pupil.



Foreign pupils have become concentrated, as was mentioned earlier, in public institutions, due to intensification of selection in the subsidised institutions when dealing with immigrant pupils. In 2004, 79.3 per cent of foreign pupils in compulsory secondary education (89 per cent in Baccalaureate) were schooled in public institutions.<sup>6</sup> The situation in all of the regions and at all levels is a significant over-representation of foreign pupils in public institutions. This has led to the “ghettoisation” of some schools, where it is difficult to provide quality education in an environment in which many pupils do not know the official language or languages (as in certain Autonomous Communities), in which there are many foreign pupils (some enrolling year-round) and in which, in addition, prior schooling in the country of origin may have been deficient.<sup>7</sup> This situation of segregation is detrimental not only for the foreign pupils schooled in public institutions where the level of quality is falling, but also, as is logical, for those native Spanish pupils who remain in the schools - unable to ‘desert’ unless middle-class - so that both foreign and native-born groups are exposed to conflict and stigmatisation.

With regard to the access of foreign pupils to the educational system, the evidence of inadequate and inequitable levels of participation can be clearly seen in Table 6.1. At all levels of education, the participation rates of the foreign nationals are considerably lower than those of the Spanish-born population, with a very large gap of almost 24 percentage points in the participation rate in post-compulsory secondary education. This situation aggravates the problem of skill weaknesses in the economically active population in Spain. In addition the PISA 2003 scores of foreign pupils were significantly below the scores of native Spanish pupils, this difference being more pronounced than the average of such differences in OECD countries as a group.

Table 6.1: Enrolment rates in different educational levels by nationality. Spain, 2001

	Nationals	Foreigners
<i>Pre-primary education</i>		
<i>Less than 1 year</i>	14.9	13.1
<i>1 year old</i>	33.7	28.7
<i>2 year old</i>	55.5	42.7
<i>3 year old</i>	79.6	64.3
<i>4 year old</i>	95.9	92.1
<i>5 year old</i>	97.4	94.6
<i>Upper secondary education</i>	57.6	33.9
<i>Higher education</i>	33.9	11.2

Note: Source: 2001 Census Data, from INE.

6 For the whole population, attendance in public institutions was 65.5% (compulsory secondary education) and 74.9% in the baccalaureate.

7 It should also be kept in mind that, often, not all members of a family arrive in the country at the same time; for example, it may be that the first children sent by the family are those whose educational or health needs are the greatest.

*Access to post-compulsory secondary education*

Poor access to post-compulsory secondary education represents a major bottleneck in the Spanish education system. Access levels, whether in respect of the academic strand (Bachillerato) or the vocational strand are well below those in Spain's nearest economic competitors. The European Council has established five benchmarks as points of reference for the year 2010. The third benchmark proposes that by 2010 at least 85 per cent of the population over 22 years of age should have completed upper secondary education. Table 6.2 gives an idea of the progress that would have to be made to meet the target, based on 2004 figures. Spain is located at the tail end of European countries, ahead of only Portugal and Malta.

*Table 6.2: Population (20-24) with at least upper-secondary education. European Union, 2004.*

	Total	Women	Men
<i>Austria</i>	85.3	85.9	84.6
<i>Belgium</i>	82.1	86.8	77.4
<i>Cyprus</i>	80.1	84.4	75.4
<i>Czech Republic</i>	90.9	91.2	90.5
<i>Denmark</i>	76.1	78.6	73.3
<i>Estonia</i>	82.3	92.3	72.5
<i>Finland</i>	84.6	87.9	81.2
<i>France</i>	79.8	81.3	78.3
<i>Germany</i>	72.5	73.4	71.6
<i>Greece</i>	81.7	86.9	76.5
<i>Hungary</i>	83.4	84.9	81.9
<i>Ireland</i>	85.3	88.6	82.1
<i>Italy</i>	69.9	73.4	66.4
<i>Latvia</i>	76.9	83.4	70.7
<i>Lithuania</i>	86.1	90.1	82.2
<i>Luxembourg</i>	-	-	-
<i>Malta</i>	47.9	48.7	47.1
<i>Netherlands</i>	-	-	-
<i>Poland</i>	89.5	91.6	87.4
<i>Portugal</i>	49.0	58.8	39.4
<i>Slovak Republic</i>	91.3	91.5	91.1
<i>Slovenia</i>	89.7	93.7	86.0
<i>Spain</i>	62.5	70.0	55.2
<i>Sweden</i>	86.3	87.6	85.1
<i>United Kingdom</i>	76.4	76.6	76.2
<i>European Union (25 countries)</i>	76.4	79.1	73.8
<i>European Union (15 countries)</i>	73.5	76.3	70.6

Note: Source: Commission of the European Communities (2005).

Access to upper secondary education is lower in some Autonomous Communities than others. The situation is especially bleak in those Communities in which integration in the labour market is easiest for young people (like the Balearic Islands), and also those in which the development of mass schooling has been more recent (like the Canaries, Andalucía, and Extremadura). Where access is above average, this is often because either there are major barriers to workforce integration for young people or there is a long tradition of going on to further education, which recent policies have favoured (as in Aragon, Navarre and the Basque Country).<sup>8</sup>

The slow expansion of the education system has meant a heavy historical burden which across Spain as a whole has held back access to upper secondary education. However, while current levels are lower than the European average, differences were much more severe several years ago. This can be seen from Table 6.3 which shows that the educational level of the parents of today's young people aged 17-18 (i.e., the bands 35-44 and 45-54 years) is markedly lower than levels in other countries (again with the exception of Portugal). Spain is paying the price of insufficient growth in its education system in the past. It will take time to reverse the effects of this inertia and in particular a major emphasis on policies aimed at eliminating the social barriers which transmit educational disadvantage across generations will be required.

*Table 6.3: Population with at least upper-secondary education. European Union countries, 2003, by age-band.*

<i>Age Band</i>	25-64	25-34	35-44	45-54	55-64
<i>Austria</i>	79	85	83	75	69
<i>Belgium</i>	62	78	68	55	43
<i>Cyprus</i>	-	-	-	-	-
<i>Czech Republic</i>	86	92	90	84	77
<i>Denmark</i>	81	86	82	80	74
<i>Estonia</i>	-	-	-	-	-
<i>Finland</i>	76	89	85	73	55
<i>France</i>	65	80	69	59	48
<i>Germany</i>	83	85	86	84	78
<i>Greece</i>	51	72	60	44	28
<i>Hungary</i>	74	83	81	75	53
<i>Ireland</i>	62	78	67	52	38
<i>Italy</i>	44	60	50	39	24
<i>Latvia</i>	-	-	-	-	-
<i>Lithuania</i>	-	-	-	-	-
<i>Luxembourg</i>	59	68	61	54	50
<i>Malta</i>	-	-	-	-	-
<i>Netherlands</i>	66	76	71	62	53

<sup>8</sup> Calero (2006b) offers a multivariate analysis of the determinants of access to post-compulsory education in Spain.

Cont: Table 6.3

<i>Age Band</i>	25-64	25-34	35-44	45-54	55-64
<i>Poland</i>	48	57	49	46	40
<i>Portugal</i>	23	37	22	16	10
<i>Slovak Republic</i>	87	94	91	84	70
<i>Slovenia</i>	-	-	-	-	-
<i>Spain</i>	43	60	48	33	19
<i>Sweden</i>	82	91	88	80	69
<i>United Kingdom</i>	65	71	65	64	57
<i>European Union (25 countries)</i>	65	76	69	61	50
<i>European Union (15 countries)</i>	63	74	67	58	48

Note: Source: OECD (2005).

The causes of the bottleneck restricting access to post-compulsory secondary education lie to a substantial extent in problems of equity. The two direct causes blocking higher transition are low achievement in compulsory school amongst a number of population sub-groups and negative attitudes towards school. These direct causes depend, in turn, on three major factors, which we discuss in more detail below.

### *Social class*

The relative chances of gaining access to post-compulsory schooling according to social background are reported in Table 6.4, using the typology of Erikson, Goldthorpe and Portocarero (1979). What stands out clearly is the fact that while 85.3 per cent of children of upper professional parents enter upper secondary classes, this is true of only 52.2 per cent of skilled manual workers' children and 27.5 per cent of the children of semi-skilled or unskilled workers. A gap of about 30 percentage points between the rate for lower blue-collar workers' children and the population average deserves to be stressed.

*Table 6.4: Population aged 16-17 in Post-Compulsory Secondary Education by Social Class Spain, 2000*

<i>i</i>	Higher-grade professionals	85.3
<i>ii</i>	Routine non-manual	61.8
<i>iii</i>	Small proprietors	56.9
<i>iv</i>	Skilled manual workers	52.2
<i>v</i>	Semi-and unskilled manual workers	27.5
<i>vi</i>	Farmers and smallholders	77.4
<i>vii</i>	Agricultural workers	36.4
<b>Total</b>		<b>56.9</b>

Source: author's calculations using European Community Household Panel data, wave 2000

### *Gender*

Girls are much more likely than boys to participate in post-compulsory secondary schooling. A gap of 14.8 per cent separates the sexes— 70 per cent for girls, 55.2 per cent for boys (see Table 6.2). As it has been some years since girls have drawn ahead throughout most levels of education, failure at school and early leaving can now be regarded as predominantly male phenomena. From primary school, the learning outcomes of girls tend to be higher than those of boys. In post-compulsory secondary education, graduation rates for girls are around 12 percentage points higher than for boys. As well as growing over time, these differences are greater than are found in the European Union as a whole.

Moreover, girls who complete compulsory secondary education are also more likely than boys to enter the academic stream of upper secondary education (Bachillerato): a transition rate of 76.3 per cent compared to only 66.3 per cent amongst boys. This reflects the stronger academic performance of girls in junior high school. Boys are at a relative disadvantage in achievement terms. They are more likely to abandon education altogether or, if they do stay, to be over-represented in the vocational stream whose economic outcomes are poorer. Nevertheless, a stereotyped pattern does emerge in the vocational stream whereby the girls who do enter it take options with weaker chances of employment transition.

### *Immigration*

There are clear differences in migrant access to post-compulsory education compared to the situation for Spanish nationals. The rate for immigrant children as a whole in 2001 was only 33.9 per cent, while the rate for the Spanish-born population was 57.6 per cent (Table 6.1). Looking ahead, it will be necessary to take greater account of the fact that the obstacles which currently block access to post-compulsory education for large sections of the working class will also impede access for immigrant children now in the compulsory years of school.

## CURRENT POLICIES ADDRESSING EQUITY IN SPAIN

Policies aimed at greater equity in Spanish education encompass both general and more targeted elements. Among policies of wide or universal application is comprehensive provision - all children have access to the same program of compulsory general education between 6 and 16 years of age. This was reinforced by the educational reforms of the 1990s. More focused programs are aimed at priority groups, such as students from low-income families (as in the case of the bursaries system), low achievers in compulsory education, and the immigrant population.

Responsibility for administering these policies is split across different authorities, both central and regional. Policies such as comprehensiveness, which have general application, depend to a large extent on basic regulations which are applied across Spain. Some of the more targeted programs such as compensatory education are also the responsibility of the central government. Nevertheless, it is

the regional governments that in recent years have most strongly developed targeted programs, especially in the area of compensatory education and support for immigrant children.

### *General (non-targeted) policies*

Policies which are intended to promote equity, without being targeted to particular groups, include the following:

- Comprehensiveness or a common curriculum in compulsory secondary education: the age at which pupils choose amongst differentiated curriculum pathways is 16 years, one of the most delayed in OECD countries.
- Gratuity: in theory, attendance at either public or publicly-subsidised schools is cost-free during the compulsory years, and also during the pre-primary education stage for children aged 3-6 years (since 2002).
- Integration: pupils with special needs attend the same institutions and classrooms as all other pupils, except in extreme cases.
- Non-selectivity: admissions to public and subsidised private schools is officially non-selective, a requirement which applies throughout Spain.
- Subsidisation of university education: the fees paid by the students cover around 17 per cent of the total cost of their education. This is a subsidy with clear regressive effects (given the very unequal participation of different social groups), although it has favoured the process of democratising access to university education in the last thirty years.

## POLICIES AND STRATEGIES FOCUSED ON SPECIFIC SUB-GROUPS

### *The system of bursaries and educational loans*

Payment of bursaries is currently administered by the national Ministry of Education (with the exception of the Basque Country, where the Autonomous Community government has exercised responsibility since the early 1980s); the basic regulation of the system of bursaries and support also depends on the central administration. Nevertheless, the administration of the system is soon to be decentralised, in line with a judgement of the Constitutional Court in 2001. The Autonomous Communities have been able, within this evolving framework, to develop their own programs of bursaries and support, at non-university as well as at university levels. However, the size of these programs is generally small.

University education receives around two-thirds of the total resources committed to bursaries. Focusing on the program administered by the national Ministry, in 2002 it had a coverage of 18 per cent of university students (20 per cent in 1995 and as low as 15 per cent in 2000). In other words, fewer than 1 in 5 university students currently benefit from the bursary system. The extent of coverage varies greatly between the different Autonomous Communities: there is an inversely proportional relation between the level of per capita income and the rate of coverage of the

system. The program has limited efficiency, especially in its redistributive aspect (see Calero, 1996). The main cause of these problems stems from the fact that the program is adapted to the social reality of the 1980s (the program was developed in 1983), but does not correspond to the current situation. An in-depth reform is needed.

Since the academic year 1999-2000, and as a complement to the process of opening up catchment areas, the Ministry of Education provided mobility grants for those students who followed university courses outside their Autonomous Communities: the value of these grants, in those cases where a change of residence was necessary, was between 2,767 and 4,668 euros.

Through the experimental loans program, established by the Ministry in the 1998-1999 academic year, university students can apply for a loan from commercial financial institutions for up to 4,200 euros per year (in the academic year 2003-2004). For students who reach a certain level of academic results, the Ministry acts as guarantor. The conditions of the loan include a repayment period of three years, after a year free of repayments, and a subsidised interest rate (the subsidy covers around 70 per cent of the interest bill)<sup>9</sup>. The aggregate cost of this program in the academic year 2001-2002 was 709,194 euros. This program coexists with other smaller ones, organised by some autonomous governments and by universities.

Looking at the place of the bursary scheme within the overall framework of expenditure on *non-university* - mainly school - education, it has to be said that bursaries play only a very limited role. They represent hardly more than 1 per cent of total public outlays on non-university education. This suggests that bursaries are a largely neglected source of support to students in schools. There is clearly very significant scope for income support, particularly to help lift low rates of participation in post-compulsory secondary schooling.

### *"Second chance" programs*

Programs aimed at restoring educational chances to young people falling behind include the *Social Guarantee Programs* (SGP) and the *Curricular Diversification Programs* (CDP).

The SGP, created in 1990, are programs running between 6 and 18 months for young people over 16 years and under 21 years of age who have not obtained the qualification of Graduate of Compulsory Secondary Education and who do not possess any vocational training qualification. The SGP objective is to improve the general education of these young people and to equip them for certain trades and jobs, based on mastering the relevant vocational competencies. Their general features are:

- The programs are provided in secondary schools and other educational institutions maintained with public funds (68.6 per cent of students in SGP attend public institutions).

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<sup>9</sup> It seems remarkable that other alternatives based on repayments associated with income were not taken into account, in spite of the advantages they offer in terms both of increased equity and reduced disincentives.

- At the end of the program, the student does not receive a qualification, but rather a certificate of participation. This does not allow SGP students to enter vocational secondary education (a serious limitation, which will be addressed further below).
- Some modes of SGP are compatible with a concurrent contract of employment.
- The number of students in SGP classes is smaller than the average class in compulsory secondary education, and two teachers are allocated to each SGP class.
- The study plan is concentrated on vocational skills and competencies.

In the academic year 2001-2002, the total number of students in SGP was 43,916. This represents a fairly rapid increase in recent years: in 1995 the programs enrolled only 13,996 students. However, the importance of the programs in the education system as a whole varies considerably between Autonomous Communities.

The SGP are often criticised because of their lack of integration within the rest of the education system, and more precisely because they do not allow access to vocational secondary education, which would contribute to the prestige of these programs and make them more attractive to students. The report by the *Comisiones Obreras* (2001) is especially critical of the SGP, describing them as a “third branch” (separated from the baccalaureat and vocational secondary education) which trains for low skills and precarious employment. This report proposed a reform of the SGP, aligning it to the Danish model in which the “second chance” programs allow recognised qualifications to be obtained and are focused on returning young people to the education system.

The CDP (*Curricular Diversification Programs*) were introduced in 1996. They are programs of one or preferably two years that lead to the qualification of Graduate of Compulsory Secondary Education (unlike the SGP). The population to which CDP programs are directed is composed of pupils of 16 or more years, who have not obtained the objectives of compulsory secondary education in their previous course. A specific curriculum, different in each school, is prepared for these pupils. The size of CDP classes cannot exceed 15 pupils.

### *Compensatory education programs*

In the year 2001, public expenditure on compensatory education made by all administrations, (central and regional) reached 105.4 million euros, or 0.52 per cent of total public expenditure on non-university education. The largest component of expenditure was met by Autonomous Communities, but there was very wide disparity in the levels of budgetary effort they made.

The Ministry of Education administers compensatory programs in the areas of intercultural education, rural schools, hospital classrooms, and home education support. All the Autonomous Communities have their own programs to support ethnic minorities, as well as hospital classrooms and home education support. In almost every Autonomous Community, education authorities operate social



disadvantage programs (in urban areas), initiatives in rural settings, programs to combat school truancy and support programs for pupils who are falling behind.

*Some examples of specific programs directed to the immigrant population*

Continuing this overview, a range of examples of intervention programs targeted to immigrant populations is described below. These examples are drawn from the Autonomous Communities of Catalonia and Madrid, each of which has a relatively high proportion of recently arrived immigrants.

- Itinerant Support Service for immigrant pupils (Community of Madrid). This has operated since the academic year 2000-2001, with the object of providing assessment and support services to schools to assist in the integration of immigrant pupils who do not understand Spanish. It is directed towards public and subsidised private schools for the compulsory stages. In each school, classes are limited to a maximum of 15 pupils. In the first year of operation, the service had 20 teachers.
- Transition Classes (Catalonia and Madrid). These classes — each have a maximum of 12 pupils — aimed at facilitating the integration of the immigrant pupil who either does not understand Spanish or is very much out of phase with the curriculum as a result of a lack of previous schooling. The pupils remain in the Transition Classes for a maximum period of six consecutive months, over one or two academic years.
- Adaptation Workshops (Catalonia). Pupils can go to an Adaptation Workshop in the morning and the school where they are enrolled in the afternoon. The period spent in a Workshop cannot exceed one year. According to CSCO (2002), this practice segregates and is not very useful as the pupils learn better in the immersion that occurs when they are schooled in a group of native Spanish pupils.
- Translation support. This involves translation of the most frequently used documents in educational institutions, such as applications for admission, announcements of subsidies for the school canteen, application for participation in Transition Classes etc. (Catalonia and Madrid).

## FUTURE DIRECTIONS OF EDUCATION POLICY ADDRESSING EQUITY

Previous sections of this discussion have highlighted the range of barriers and tensions affecting equity in Spanish education. Policies implemented over the last thirty years have been ambitious and have contributed substantially to a democratisation of the system. Nevertheless, it is also clear that more proactive measures are needed to improve equity. In my conclusion, I will briefly describe a set of six measures which I consider most relevant.

1. Raising the status of vocational education and training, particularly at the school level. Better quality in vocational studies will lead to an improved perception and appreciation on the part of students, to higher levels of educational participation, and to more successful employment transition, thanks also to more positive views on the part of employers.

2. The baccalaureat (*Bachillerato*) has been converted into an “academic fortress” within the education system. Both teachers and students see it in this light, and the curriculum maintains a strong separation between vocational studies and the baccalaureat itself. This situation reinforces the distance between the working classes and academic studies. Diversification of baccalaureat programs through the introduction of applied learning and vocational options would favour the expansion and democratisation of access to this level of education.
3. The public authorities in Spain have difficulty enforcing the legal obligations of fully-subsidised private establishments to offer free instruction and also to be non-selective in their admissions. It is essential to develop suitable measures of compliance to meet these obligations and to prevent a progressive distancing between subsidised schools and the wider public system.
4. Reforms are needed to the “second chance” programs — Social Guarantee (SGP) and Curricular Diversification (CDP) — so that these are fully integrated in the mainstream and cease to operate as marginal or relegation strands.
5. Stronger incentives are needed to raise levels of access to post-compulsory secondary education, especially amongst disadvantaged groups. Though barriers to access are not essentially economic, it should be stressed that the system of bursaries applying at this level is very limited and their design philosophy is outmoded. The capacity of purely economic incentives to boost access to post-compulsory studies is, of course, limited, and perhaps very limited in the case of higher education, thanks to the influence of social and cultural factors acting over many years on the outlook and experience of individuals. To ensure effectiveness, it would be necessary to re-direct the income support represented by bursaries to those levels in the education system in which financial need does have a significant bearing on access - secondary education rather than tertiary. Reform of the bursary system should also be undertaken in conjunction with non-financial measures (as in the case of the *Excellence Challenge* in British higher education) and the establishment of continuity for bursary holders linking support across secondary and higher education.
6. Interventions at much earlier stages of education, pre-school, especially for 0 to 2 year-olds — represent a powerful instrument for reducing social inequalities in achievement and also in school completion. Valuable empirical evidence has built up in recent years which points in this direction.<sup>10</sup> Programs of early intervention have a very favourable cost-benefit ratio in respect of both cognitive gains and social outcomes. Moreover, the effects of these programs are greater for boys and girls from disadvantaged backgrounds. As such, early intervention can be more relevant than “traditional” approaches, even though the benefits are

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<sup>10</sup> See, for example, the work of Esping-Andersen (2005) and of Heckman, Krueger and Friedman (2003).

produced over the medium to long term. There is a grave shortage of pre-school facilities in Spain for the very youngest children (see González 2005), so there is wide scope for intervention at this level with programs focused on quality and equity and a promise of potentially very fruitful results.

The decentralisation of administrative powers in the Spanish education system means that many of the policies aimed at tackling inequality cannot be developed in a directly generalizable form across the whole of the country. This situation has to be kept in mind as it has a dual implication. On the one hand, the potentially homogenising effects of equity policies are limited (which may mean more or less uneven progress, even on measures of proven worth). On the other hand, decentralisation permits policies and programs to be adjusted to the distinctive environments and needs of each region, which may mean potentially greater impact and effectiveness.

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## A Norwegian Perspective

*Petter Aasen*

## INTRODUCTION

Concepts are socially constructed. Historical actors from time to time reconsider their meanings. Recent developments in Norwegian educational policy have redefined the concept of equity by introducing the term ‘equivalent’. This term stresses the importance of individual autonomy and diversity. It refers to the right of all individuals through schooling to learn basic competencies and be prepared for different but equivalent outcomes depending on individuals’ abilities and ambitions. This signals a retreat from equity in a stronger sense as it was interpreted in the first decades after World War II. During this era equity was understood as ‘equality’, and the notion of equality of results was added to the notion of equality of access to education. The significance of equality of results was that it applied to identifiable social groups rather than to individuals and implied active intervention by the state in order to create equality of outcomes for different groups. This chapter describes and analyses transformations in the meaning of equity in Norwegian educational policy.

## EDUCATIONAL PARTICIPATION AS SOCIAL REPRODUCTION

Compulsory education for all children in Norway was introduced in the General Education Act of 1739. This was a manifestation of the philosophy of enlightenment and the contemporary pietistic movement with its valuing of benevolence and material exertion resulting in increased welfare. The Act required that equity should be realised whereby all children, irrespective of their parents’ social position and class, should be accorded a certain basic useful and necessary education. This was an interpretation of equity that also applied to a minimum of basic skills. But above and beyond this minimum training, society accepted an education that served to function to reproduce the not inconsiderable inequalities existing in Norway during the eighteenth and first half of the nineteenth centuries. Every social class was to have its school. It was essential to differentiate schooling and the process of enlightenment according to the contemporary social structure. Within every class of society enlightenment was to be encouraged, but knowledge introduced to the particular class was to be determined by its status and function in society. Education

should not signal elevation into another class in society other than that in which the child had its rightful place. The individual was to be taught those skills appropriate to the lot of his or her class. The school was to teach the student to be satisfied with those circumstances which life offered (Dokka 1967; Solstad 1994).

## EQUALITY OF OPPORTUNITY

### *Comprehensive education and nation building*

Commencing in the 1850s a new understanding of the nature of mankind was formed under the umbrella of enlightenment philosophy in alliance with romantic idealism and gradually, also in alliance with the labour movement. While the authorities influenced by pietism, had little confidence in the ordinary person's need for enlightenment, the ideological position under the liberal bourgeois political regime in Norway in the decades to come was that the masses should be educated and enlightened. Attention was now directed towards that which, in the language of the time, was variously referred to as "the class cleavage", "this disconsolate division between high and low", and "this artificial distinction" (Telhaug & Mediås 2003: 74–78).

In practical school policy the philosophy of equity was implemented first and foremost through providing equal opportunity by securing all citizens access to a common, basic education. This implied the dissolution of the old parallel school system and the establishment of a public, 'unified' school system. The concept of equity in education referred to 'comprehensive unified schooling', meaning that all students would enrol in public schools with a minimum of streaming. The rationale for comprehensive schooling included references to its advantages as a meritocratic system in instrumental terms, but first and foremost educational policies stressed nation building as a motive of education. (Telhaug & Mediås 2003; Telhaug, Mediås & Aasen 2004). School was to promote a commonly shared national culture that in turn would underpin national identity. A common national culture was seen as a foundation for social cohesion, democratic values, and civic spirit implying that social class loyalties were subordinate to loyalty to the nation.

The Act of 1896 pertaining to secondary public schools saw secondary education linked to the fifth grade in the elementary school in that the first five grades in the compulsory system were common to all who applied for a place in the public secondary school. During the parliamentary debate on the budget in 1920, Parliament resolved that secondary public schools should be linked to the final grade of the 7-year elementary school that was by then common for all children.

Hence, the principle of equality of access and the comprehensive school retained a strong position in Norwegian society towards the end of the nineteenth century, and continued into the next. There are several explanations for this. Latin, the language of the upper-class had many eloquent and powerful opponents, and Norway was to make an early and decisive break with the Latin-European homogenous culture, more so than the majority of other European countries. As such the possibility was open for all children to attend a communal school based upon a

national culture. There was no strong conservative power base in Norway, and contrary to many other countries, the farmers successfully mobilised their opposition to the conservative faction. Entering the twentieth century populism, understood as considerable respect for ordinary people as the purveyors of society's cultural values and national identity, assumed a correspondingly strong position in Norwegian society.

## EDUCATION AS A COMMON GOOD

### *Social inclusion and equality of results*

The interwar years brought the labour movement into power in Norway. The Labour Party adopted the Keynesian idea of a welfare state. According to the Keynesian argument an equal distribution of income and opportunity would stimulate economic growth. After World War II Norway developed what has been referred to as a social democratic welfare state model, as did the other Nordic countries (Esping-Andersen 1996). This model stresses the redistributive role of the state, social inclusion, and equality underpinned by high levels of taxation and public spending. The overall objective of this model was the integration of members of society into an egalitarian national community. What particularly characterised classical social democracy was the transformation of a relatively passive bourgeois state into an active, strong authority engaged in national planning. Towards the end of the inter-war period and during the first decades following the Second World War, a positive view of the state and the public sector gradually emerged. This new confidence implied expectations that the state should be far more active than hitherto in planning and controlling the development of society and solving problems facing the community through universalistic policies rather than means-tested assistance. Unlike the development in the rest of the western world where there was a strong belief the private sector and market solutions, the state assumed responsibility for undertakings that previously had been assigned to the market and civil society. The expansion of the state and the public sector was based on the view that it was the particular responsibility of the state to promote the collective values and interests of society (Telhaug, Mediås & Aasen 2003).

This political context determined that high value was placed on education. The school's role as an element of the welfare state became firmly established in public consciousness and in the political agenda. Schools benefited considerably from the public purse. By the 1950s Norway and Sweden both used a greater proportion of GDP for education than any other country in Europe, and teachers had high status in society, both socially and financially, not only because of their idealism but also because of the strong position of the teachers' unions and the high standards of recruitment into the profession. The political circumstances in general and educational policy in particular favoured further development of the egalitarian tradition and the comprehensive school system. Implementation of a structure where, instead of different types of schools existing in parallel, a common school for all children and young people extending as far up the educational system as possible

was pursued. The school emerged first and foremost as a public institution. Between 1945–1970 the number of private schools declined, and at the end of the period the number of pupils in these schools comprised no more than 0.5 per cent of the total number of children of compulsory school age (Telhaug 1994).

During what has been called “the golden age of social democracy” or “the Social Democratic Order” (Furre 1991, Sejersted 2005) from 1935 until 1981 the pursuit of equity in education through equality of access, was combined with the idea of equality of results. While the former addresses the responsibility of the state to provide equal opportunities to participate, the latter is concerned with whether children from different social groups actually take advantage of that access and are successful in doing so. From this perspective providing the same opportunity is not enough because children with different economic, social and cultural background will need different kind of opportunities and support in order to be successful. Working for equality of results did not imply that all children individually should reach the same level or identical end results, but aimed at reducing the differences children and youth possessed when entering school. In this way the pupil’s merits would not reflect their social background. If children from different backgrounds were to have similar chances in life, they would have to be treated differently (Hernes 1974). Hence, educational policy introduced different provisions ensuring actual participation/enrolment and a substantial degree of success encompassing groups or categories. Differences in outcomes were not to be attributable to differences in characteristics such as gender, wealth, income, power or possessions. In the policy approaches to improve equity defined as equality of outcomes the state played a crucial role in ensuring that all citizens had real and not only formal access to the resources necessary. Equality of results necessitated inequality of provisions and resources (Slagstad 1998; Telhaug 1994; Aasen 2003).

As we have seen, the development of the Norwegian educational system was embedded in the Nordic welfare state model (Esping-Andersen 1996). Services and income transfers in this model were aimed at all citizens, in accordance with the universal principle of social rights. This is in contrast to the liberal welfare model that has been prevalent in the Anglo-American world, where the primary foundations of social security are private markets and the family. If they fail, national security policy may step in providing temporary support. In Norway in the immediate post-war years the idea of universal and equal rights to education received broad political support. The ideal was that the educational career of the individual would be determined by ability and talent, and not, for example, by social status and place of residence. During the first decades after World War II this philosophy was increasingly applied to growing numbers of the population. Attention was given to groups or categories where participation and success had been less satisfactory. These included women, those of lower socioeconomic status, people from different geographical circumstances, persons with disabilities, and ethnic minorities.

Several measures or instruments were introduced to erase social inequalities through equality of educational results. The golden age of social democracy resulted in major advances in the comprehensive school. Compulsory, unstreamed comprehensive schooling was extended from 7 to 9 years. Pupils were to benefit



from a joint academic curriculum in which the course was constructed in successive stages. A national curriculum with minimum requirements was introduced in all subjects in the compulsory school along with a common national grades system. Textbooks were to be authorised and the political authorities demanded that textbooks in compulsory education were to be available simultaneously in both Norwegian languages. The principle of equity was to be made a specific subject in the school curriculum. The upper secondary school for youth in the age range 16 to 19 was converted to a comprehensive school in contrast to the previous division between schools providing academic preparation and those providing vocational training. The availability of upper secondary education was extended in rural districts. Changes in the Compulsory Education Act of 1975 resulted in the principle of the integration of mentally handicapped children into the compulsory comprehensive school system being adopted. As from the school year 1976–77 the entrance requirements to upper secondary schools ensured that at least two per cent of places were to be made available to special needs students. Private schools were few, and for a long period they had to manage without state support. A thorough examination of the municipalities' implementation of the central regulations was carried out by the state in order to ensure a standardisation of the schools' framework conditions. In order to ensure that salaries and working conditions for teachers were uniform throughout the country, responsibility for negotiations with teachers' organisations was taken over by the state in 1948. Access to education was made free throughout the system, from first grade to higher education. A state educational loan fund was established in 1947 to support students' room and board with the intention of erasing social inequality in recruitment to higher education. A quota system for the sexes, i.e. a positive discrimination towards one gender, was utilised to some extent in order to ensure the equality of women in recruitment to higher education (Telhaug, Mediås and Aasen 2006).

With reference to pedagogy the Social Democratic Order was oriented towards international progressive education and its appreciation of the child's personal potential. The ideal was the pupil-centred, contented school which provided space for happy and spontaneous pupils: the ambition was to engage them in a productive activity that gave them the opportunity to be involved in the choice of problems and methods of problem solving through investigative and creative initiatives. Schools' use of external incentives such as grades and examinations was reduced and the emphasis placed on teaching method based upon pupils' own motivation. School reforms pointed to the danger that ranking pupils could result in a sense of humiliation and stigma, which could have a negative effect on their self-confidence and desire to learn. To this it must be added that there is a long and winding road between political and pedagogical intentions and educational practice. During the first decades following the Second World War, everyday life within the Norwegian educational system continued to be characterised by the strong influence of tradition on educational practices. Significant weight was attached to the teacher's ability in front of the classroom and the pupil's subservience and receptiveness.

## ADVANCING EQUITY

*Balancing standardisation and individualisation*

From the middle of the 19<sup>th</sup> century onwards the political ideology was based on populism, liberalism, and a focus on parental rights. It attempted to combine the principle of equality with respect for municipal self-autonomy. This autonomy accorded the municipalities with considerable influence concerning subjects and schedule, the system of assessment and teachers' salaries. It was not overlooked that competition between private and public schools could have a stimulating effect. With the importance attached to equality of results and social inclusion, the period of the Social Democratic Order, on the other hand, introduced strong national control. The state was regarded as the good fairy, as an expression for communality and as a body obligated to ensure social justice. The state was to be divorced from special interests and should promote the superior interests of society. The state was to control market forces and cooperate with owner interests in trade and industry (Furre 1991). As an expression of the common interest and an exponent for the principles of justice the state was given the role of both an innovator in educational planning and as a controlling authority. Children and youth as students were regarded more as state property than parental property.

The radical extension of the comprehensive school system in Norway as in the other Nordic countries under the Social Democratic Order was based on two primary objectives. The first was the economic or instrumental objective, based on the assumption that there was a clear association between the general level of education in the population and economic growth (Aasen 2003). Supporters of the comprehensive school system also maintained that this form of school organisation was in a better position to unearth any hidden talent. More than the system of parallel schools, it had the best potential for acting as an effective "head-hunter". The second objective was social inclusion. This was the main objective for the comprehensive school system. The Norwegian social democratic school reformer and minister of education Helge Sivertsen underlined this position when the Norwegian parliament debated the introduction of a 9-year comprehensive school in 1959: "The entire basic philosophy underlying the reform is the social aspect" (Volckmar 2005). The school was to serve as a social melting pot where children from different backgrounds met and worked together. The structure of the comprehensive school system with its unstreamed classes was to create the foundations for a social community within schools. In this way schools would promote social equality and democracy and erase social barriers. As late as 1968, Olof Palme, then the Swedish Minister of Education declared: "The school system is, and remains, the key to abolishing a class-based society" (Richardson 2004).

In summary, we may say that during the period of the Social Democratic Order the policy of equity was recognised as a combination of standardisation with regard to subject matter and framework elements, and individualisation of instruction and learning. When the standardisation of the schools was found not to be uniform in practice, this was not least due to the fact that the social democrat modernisation

project had instilled the equality motive with an understanding that implied that the differences between students were to be respected. Schoolwork was to be suited to the ability, capacity and interests of the individual, such that students progressed at different rates, meaning that personal differences increased from one stage to the next. In other words, the outcome of education should not reflect the student's social or cultural capital, but more the opportunity for the development of individual's personal abilities and skills given by social inclusion within the comprehensive school.

Towards the end of the Social Democratic Order, the Norwegian ideals of equity became the subject of debate based on three premises. First, through the parliamentary Act of 1970 the non-socialist parties were able to ensure that private schools were qualified to receive state support. The argument presented in support of this Act was the parental right and responsibility to select their child's education. Consequently, recognition should be given to schools based on a particular philosophy or founded on special spiritual, moral or religious values. Acceptance should also be made of schools adopting a different pedagogic approach to that of the public education system.

Second, the neo-radical political movement during the 1970s broke with the social democratic state efficiency ideals and its belief in central management and control. At the same time progressive educational scientists taking an anti-positivist position and promoting critical, emancipatory education, questioned the national standardisation of the curriculum. This alliance between the academic expertise and the political left wanted to replace efficiency with reflection and national control with local and individual freedom and development. Nation building was to be replaced by local community orientation and self-building. Dedication to detailed national curriculum and teaching materials was to give way to individual development through education characterised by dialogue, project-centred methods and a locally-based curriculum and teaching materials. Equity based on a common cultural heritage and minimum standards was no longer considered an undisputed value. On the contrary it was associated with cultural domination and hegemony.

Third, empirical research documented that the implementation of the equity motive was not without problems (Telhaug 1994). In so far as research turned towards the equality of possibilities and recruitment into different schools, it was possible to show a certain smoothing out of differences, indeed, to very considerable changes, over time. Nevertheless, many of these differences were still significant. This applied, for example, to applications for higher education from different regions, and also to differences between the genders with respect to educational and career choices. What was even more serious than these differences with regard to employment was that the various measures aimed at equalisation had had little effect on the students' achievements or grades. Studies published in the 1970s showed that achievement in the compulsory schools was still clearly related to social background. A parliamentary report (NOU 1976:46) considered that on this basis the school continued to reproduce and legitimise general inequalities in society.

## EDUCATION AS A PRIVATE GOOD

*Equivalent and individual adaptive education*

Commencing in the 1980s and up to the present time, the Social Democratic Order has been replaced by a new political order, which may be characterised as dialectic inasmuch as it unites the belief of a relatively strong state with a neo-liberal philosophy characterised by a market-based, choice-driven consumerist policy (Aasen 2003). The good state that ensures justice goes hand in hand with a renewed confidence in local autonomy, market-based solutions and individual choice. A new alliance of neo-liberal and neo-conservative positions, more clearly than hitherto, promotes the philosophy of sovereignty of the individual with responsibility for his or her own destiny (Eriksen, Hompland & Tjønneland 2003). With the state being described as overgrown and ineffective, its support to individuals in society became formulated more in terms of individual rights and less as collective obligations. Through decentralisation and devolution local authorities have gained increased responsibility for school development and have been made more accountable for school results.

This ideological turn in educational policy was undoubtedly influenced by international political trends. In the western world, concern arose as to how a steadily increasing level of expenditure was to be financed, and how this method of financing was to be kept under control. The state had become too large and was increasingly being criticised for inefficiency. Furthermore, there was a danger that the large, strong state would foster a dependency culture, leading to a decline in personal responsibility, with a lack of self-help and work discipline. Facing such questions, Norway as other western countries chose to revert to market mechanisms and competition as means of ensuring efficiency. The social security state was to be replaced by the liberal competitive state.

However, the ideological change must also be understood on the basis of internal changes. At the same time the neo-liberal criticism of the inefficiency, expense, and uniformity of the public sector in general, and of schools in particular, emerged, educationally Norway was situated in a new, complex and contradictory situation. The legacy of the social democratic educational model is based on a vision of a homogeneous society and a rather simplistic definition of the common good. Within the framework of a global economy, cultural emancipation, secularisation, growing relativism and multicultural pluralism, this became more complex. The free flow of information and immigration meant that the special distinction between 'inside and outside' collapsed. The rapid advance of technological innovations continually redefined the nature of social relations and altered the conventions of material production in a manner that rendered many aspects of everyday life ephemeral, if not completely unpredictable. The aspiration was no longer to reconcile, but to understand divisions that existed between ethnic cultures, social classes, linguistic communities, and gender-based identities. Accordingly, the distinctions found within and between such groupings should not only be tolerated but also celebrated. Put differently, after World War II the Norwegian social democracy asserted human equity, reasoning that everybody is equal. From the 1990s on, cultural liberalism and pluralism emerged, claiming human equity by reasoning that everybody is different.

This became a challenge for educational policy and schools. In a multicultural, pluralist society, common goals and the common good are not self-evident. In the 1990s, a great challenge for the renewal of social democracy policy was to redefine and reconstruct the common good and the modernist quest for certainty, security and predictability. And furthermore, in a society of abundance, the social democratic welfare state had to a large extent lost its ideological and moral base. Accordingly the social democratic welfare model as a social safety net and the system of comprehensive education based on equality came under serious internal pressure.

In 1975 a Norwegian minister of education stated in an interview, "Norwegian schools are the best in the world" (Telhaug 1994: 35). This expression of self-satisfaction was undoubtedly based on the many studies of the Norwegian and Nordic school system undertaken by international researchers. Indirectly, the considerable interest of international researchers in education in the Nordic countries showed that the Nordic model was regarded as an ideal for other western countries (Nilsson 1987). At the turn of the 21<sup>st</sup> century, however, an "academic crisis" was to affect the Norwegian self-satisfaction with the national educational policies. This occurred when international measurements carried out in a large number of countries revealed that students' academic achievement and work motivation were mediocre in Norway. The studies involved TIMSS (Trends in International Mathematics and Science Study) and PISA (Programme for International Student Assessment), encompassed studies conducted in 1995, 1999, 2000 and 2003 which recorded student achievements in mathematics, natural sciences, reading and problemsolving at various stages of schooling (Kjærnsli, Lie, Olsen, Roe & Turmo 2004). The PISA study of 2003 for mathematics and reading skills showed that Finland was among the leading countries in the world, ranking second in mathematics and first in reading skills. In the same studies, the other Nordic countries were ranked around the mean or just above for OECD countries. The results from the TIMSS and PISA studies revealed a broad spread in student achievements. The proportion of academically weak pupils was larger in the Nordic countries than in most other European countries despite the strong position of the comprehensive education system. In several studies, Norway ranked lower than the other Nordic countries. In the TIMSS survey of 1995, Norway had the lowest score of all European countries in natural sciences in the 4<sup>th</sup> grade (pupils aged 9 years), and from 1995 to 2003, Norwegian students' performance declined by the equivalent of one year in mathematics.

The political left and the leading academic educational expertise in Norway reacted to the TIMSS and PISA studies either with silence or with disbelief in the reliability of the measurements. The experts maintained that the measurements were intended to make comparisons which were not practical because there was no common standard of what was considered to be a 'good' or a 'poor' school. Both the experts and the left-wing politicians pointed to the fact that the surveys only evaluated one of the school's many objectives, the ability of the student to reproduce knowledge and skills. They did not evaluate the pupil's acquisition of the basic social values of Nordic democracy. The experts explained the excellent results of the Finnish schools by the fact that the country has few immigrants and a sound, very prestigious teacher training program with a selection process which admits only the

best applicants. Nevertheless, the results attracted considerable attention on the right-wing as well as in the national press and professional journals. The second-rate results came to characterise the Norwegian school debate and the political agenda in subsequent years as no other theme had previously done. Thus, a revision of the curriculum in primary and secondary education has concentrated on increased teaching hours in the theoretical skills (the mother tongue and mathematics). Teacher training has focused on the need to increase recruitment, accompanied by more stringent entry requirements and an increased workload during the training period. Further, the reforms have provided the candidates with greater opportunity for specialisation than had been offered within the framework provided by the social democratic organisation of the system.

Hence, the international measurements and the recognition of the “academic crisis” from the year 2000 onwards accelerated the ideological turn in Norwegian educational policy. The rationale for educational attainment has changed from emphasis on common culture and social inclusion to a focus on individual academic standards. Increasingly, education is regarded as a private rather than a public good. Accordingly, schooling should give children opportunities to develop their individual abilities and interests they possess “naturally” and use them for their own benefit. This will also be beneficial to the nation’s ability to compete in the global market. The social motive of schooling as outlined under the Social Democratic Order has acquired lower priority, giving way to notions of individual freedom of choice and differentiated, adapted and customised education.

To this it must be added that, compared with other Western nations, Norway to a larger extent has continued the policies of a public, unified educational system, social inclusion and solidarity. In contrast to the renewed conservatism in many nations, the new educational reforms in Norway can be viewed as a defence and renewal of social democratic progressive education to meet the new challenges of late modernity. This defence takes place within a contradictory, dialectical framework that contains residual elements from traditional social democratic policy but also powerful conservative elements. Thus, based on an international comparative perspective, educational policy in Norway has maintained a social democratic meta-perspective.

Viewed more from an inside perspective, it is obvious, however, that the more traditional social democratic policy of education has been contested since the early 1980s. Hence, in endorsement of equity less importance is attached to equality of results in the educational political rhetoric. More often equity is understood as equivalence of status. The frequent use of the term ‘equivalent’ rather than ‘equal’ illustrates the ideological shift in educational policy, from a sociological perspective with strong emphasis on equal life chances for all citizens and equality in outcome or result between social groups, to appraisal of greater individual autonomy and diversity. This form of equity will emerge from the individual merits of education, but does not imply that the content of the educational courses is identical for all students at the same level. It is stressed that all students are of equal worth, but none of them are alike. The argument of equality in actual recruitment and choice of educational careers between social and cultural groups is no longer as prominent as previously. Accordingly, recent reform initiatives have attached considerable

importance to education meeting the training and development requirements of the individual. The White Paper from the Ministry of Education and Research introduces a school for 'Promoting Knowledge' through diversity and differentiated, adaptive and customised education to meet the pupil's individual needs (St. meld. 30 2003–2004).

Under right-wing as well as left-wing oriented governments the social motive of education has attracted less attention in recent years than was the situation under the Social Democratic Order. The educational policy rhetoric, more so than before, has expressed worries and displeasure with a lack of proficiency in major subjects, and has demanded greater effectiveness concerning the school's obligations in imparting knowledge and raising standards. More weight is placed on schools' accountability for pupils' individual achievements. The national authorities shall contribute good framework conditions, support and guidance, and at the same time mobilise greater local creativity and commitment by allowing increased freedom for schools. Efficiency, on the one hand, shall be upheld through clear national objectives for education, a national curriculum with a defined level of measurable basic competence required within each subject, and in addition through national tests. National tests in basic education were carried out for the first time in Norway in the spring semester of 2004. In order to stimulate municipal and local initiatives, school policies in recent years have aimed at reducing detailed control by the state so far as this is associated with curriculum specifications, authorised teaching material and the organisation of work within the individual school. Regarding the means employed in the process of education, the key concepts in contemporary school ideology in Norway are quality and standards, competence and skills, diversity and variation, decentralisation and deregulation, flexibility and individuality, local and personal autonomy, freedom of choice and user or customer control. The Minister of Education in a centre-right-wing coalition government formulated the government's management policy when she stated in 2002, "We must decentralise responsibility, improve quality control, and provide the user with increased powers of participation. The school must be managed from the bottom up, not from the top down, according to nationally determined objectives" (Utdannings og forsknings departementet 2002). The Minister of Education in a centre-left-wing coalition government has repeatedly stated the same position in 2006 (Djupepedal 2006).

Decentralisation took off in 1986 following the introduction of a new income system for local government which very largely replaced the previous system of earmarked subsidies with a block grant system of transfers to the municipalities who were then free to distribute funds to various tasks according to local priorities. The next stage in decentralisation came in the 1990s with the introduction of management-by-objectives, which also has as its aim providing basic units of government with greater freedom and choice of means. During 2002–2003 the responsibility for negotiating teachers' salaries and terms of employment was transferred back from the state to the municipalities. Local government now has the opportunity for differential treatment of teachers in respect of salaries. With deregulation and flexibility as its objectives Parliament has phased out a number of central regulations in favour of greater local autonomy.

The political authorities both at central and local levels have increased parental choice of school for their children based on the understanding that pupils in compulsory education are parents' children more than children of society. This initially occurred through a new Act on Private Schools from 2003, which significantly simplified the establishment of subsidised private schools or so-called free schools by parents. This trend is paralleled in some of the larger municipalities where pupils/parents have the right to a free choice of school. Parental choice implies competition between schools and the application of market theory to education. The introduction of market competition involves devolution of financial, staffing, and policy issues to individual educational institutions. The publication of school league tables of national test results was for a time educational policy. The assumption is that once the market context has been established with appropriate incentives and market disciplines, competition between educational institutions will serve to raise standards. Raising educational standards for all is thus seen as a question of school management and quality of teaching. The management of the school and the quality of the teachers determines school success and failure. On the other hand there is an awareness of the problems connected with parental and individual choice and privatisation. School effectiveness is not independent of the nature of the school intake. The consequences of freedom of choice and incentives for both suppliers of educational services and for customers can be that the differences between schools in respect of quality become broader. The notion of market orientation within educational policy is accordingly recognised as a problematic viewpoint with respect to both overall academic achievement and equity. A new centre-left government has, for example, recently stopped the publication of national test data for individual schools.

## CONCLUSIONS AND REFLECTIONS

### *The Norwegian paradox*

The current Norwegian philosophy of equity is characterised by a dialectic ideology. Equity based on social inclusion, solidarity and the political ambition of minimising social inequality is challenged and balanced by the demands for efficiency and an instrumental perspective with more attention to individual academic standards and the national economic benefits of education. While the Social Democratic Order was strongly engaged in equity understood as social justice endorsed through equality of results, more recent trends towards a neo-liberalist philosophy have attached more weight to individualism and equity, endorsing greater freedom of choice for schools, teachers, parents and pupils.

Recent developments in Norwegian educational policy have redefined equity in educational policy as equivalence. The concept equivalence refers more to an understanding of the right of the individual to a solid education that pursues the individual's interests and improves the individual pupil's basic skills. National educational policy emphasises the importance of being able to express oneself orally and in writing, to read, understand arithmetic and use information and



communication technologies. Skills such as these are regarded as useful and necessary for creating material values, but they also open up paths to further education and lifestyles that would otherwise have been blocked. Accordingly, rising standards are important for the national economy, but also for individuals, enabling them to compete in the global labour market. In many ways current educational policy has turned its back on traditional social democratic state intervention to regulate the competition for credentials in order to reduce social disadvantages. This signals a retreat from equity in the strong sense as it was interpreted under the Social Democratic Order. To the notions of equality of access to education and equality of treatment, the Social Democratic Order added the notion of equality of results. The significance of equality of results was that it applied to identifiable social groups rather than to individuals and implied active intervention by the state in order to create equality of outcomes for different groups. The distribution of outcomes should be uncorrelated with individuals' social background and gender. Even though educational policy in the post World War 2 period defined individualisation of education and the adaptation of education to the differences between children as a dimension of the equality principle, the current principle of equivalent education puts more weight on the opportunity for the individual to choose and receive adapted and tailored education. Furthermore, with reference to social and cultural complexity and diversity, equity, understood as fellowship, communality and social inclusion, and the introduction of a shared common culture, attracts lesser attention in recent policy documents.

We can interpret the principal of equivalence as a political attempt to reconcile the ambitions of an educational system endorsing both equality and diversity. Equivalence does not imply that that curriculum and qualifications should be identical for all, nor that everybody should complete higher education. It indicates, however, that equal levels of education should have equal value and impact on people's opportunities, for example, in terms of access to labour market positions or further education, while it is acknowledged that young people, as well as their parents, have different preferences and talents. Further, the concept of equivalence is used to justify decentralisation of educational authority, more flexible curricula and the freedom to establish subsidised private or independent schools.

In spite of the changes in educational policy and the development that has taken place within the educational system and in schools in recent years, it is still, however, possible to identify a particular Norwegian or Scandinavian political philosophy based on the Nordic welfare model of society. Social democratic progressivism is still recognisable, and there is a good reason to believe that it will continue to make its mark on educational policy as a result of a Red-Green political alliance that came to power after the parliamentary elections in 2005. Accordingly, in recent educational reforms influenced by international tendencies described as 'conservative modernisation' (Apple 2001), the state has retained a stronger position in Norway than in many other countries, including other Nordic countries. Equity is still to a certain degree associated with erasing differences, promoting common values and encouraging equality of opportunity. There are few private schools, and standards within public schools are reasonably homogenous throughout the different regions. Hence, within educational policy equity is understood as an aim

encompassing both the question of diminishing differences in society through equal opportunity, yet simultaneously paying consideration to the value of differences between children. When a centre-right wing coalition government came into power after the elections in 2001, the Prime Minister in the inaugural address declared the government to be bound by values such as a just distribution, international solidarity, a genuine equality of the sexes, equal opportunity and unifying values. These are objectives that during the last two decades under different political regimes, have been specifically maintained through, for example, the extension of compulsory comprehensive schooling from 9 to 10 years, the statutory right for all youth between the ages of 16 and 19 to receive a three-year upper secondary education, and through more recent parliamentary legislation enabling adults to take the primary school and upper secondary school examinations, and gain admission to higher education granted on non-formal competence. The new Red-Green government has recently placed greater restrictions on private schools. In a new reform now being implemented, it stressed that schools shall prevent the technological revolution and its demands for digital skills from creating new differences among the population.

Norway is a rich country with one of the highest gross products per capita in the world. It is a country with a relatively high employment rate. The unemployment rate in spring 2006 was 2.8 per cent. Norway is the fifth most equitable country in the OECD on the Gini Index, an index measuring the extent to which the distribution of income or consumption among individuals or households within a country deviates from a perfectly equal distribution. That is not to say that the distribution of educational outcomes in Norway is uncorrelated with individuals' social background. Inter-generational income mobility is, however, far greater, occupational destinies and educational attainments are substantially less determined by luck of birth, and cognitive abilities depend less on parental background than in most other countries (Esping-Andersen 2005). Even though equality of result has not been prominent in the educational political rhetoric under the new political order the last decade, when explaining why the social inheritance of life chances is so much weaker in Norway (and Sweden and Denmark) than elsewhere, we probably should not underestimate the importance of the educational system as a leveller of inequalities.

In 2005 Norway participated in the OECD thematic review of equity in education (Opheim 2004; OECD 2005). With reference to international comparative measurements of skills in general and the results of the PISA tests in particular, the international reviewers conclude that it is clear that Norwegian pupils are underachievers in comparison with their international peers at the age of 15. However, international surveys of adult skills show that young Norwegian adults perform very well. When data from form the Adult Literacy and Life-skills survey (ALL) for those aged 16 – 25 are compared with PISA results at age 15, Norway's comparative position improves markedly. Amongst the 16-25 year olds, Norway records the best average results, the lowest spread, and the smallest proportion of relatively weak performers (OECD 2005). Even though this observation is not based on longitudinal data, the OECD's tentative conclusion is that Norwegian young people tend to catch up between age 15 and early adulthood. International surveys

show that the Norwegian adult population has excellent literacy skills in comparison with other countries. This paradox indicates that the Norwegian education system has underlying strengths which need to be sustained and developed. Possibly the lesson from 'the Norwegian paradox' is that a public comprehensive educational system through upper secondary school characterised by social inclusion, elimination of dead ends, second-chance possibilities throughout the system, abolition of grading procedures the first seven years of compulsory school, minimisation of performance anxiety and a patient approach to learning yield more rewards when educational attainment and equity is evaluated in a lifelong learning perspective.

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### EDUCATIONAL INEQUALITIES IN THE SOVIET UNION

Soviet policy towards total literacy and equality of access to education for all was quite successful. A great number of people from previously underrepresented groups (such as workers and the rural population) gained opportunities to acquire an education and raise themselves in the social hierarchy using education as a social elevator.

Soviet education gradually transformed itself initially to provide literacy for everyone to a system of compulsory primary education (1930) and later a primary-secondary system providing a minimum of eight years of education (1958). Eventually, in the 1992 Law on Education, nine years of education was affirmed as the required minimum. (Currently Russia is on its way to a compulsory 11 years of primary-secondary education, while in some regions like Moscow and Tyumen such a provision is already law). In Soviet times, education was publicly provided and free for everyone at all levels of society. Government guaranteed the right to free education for everyone up to general secondary level and beyond that at senior secondary and tertiary vocational level on a merit-driven competitive basis.

When the Soviet Union fell in 1991, enrolments at the primary level comprised 89.3 per cent of the 7-15 age cohort, general secondary enrolments 23.6 per cent of the 15-18 age cohort, and senior secondary and vocational/technical enrolments 48.5 per cent of the 15-18 age cohort. Soviet higher education of the 1980s had already entered a stage of mass participation: almost a quarter of the 19-24 age cohort (23.9 per cent) were students of higher educational institutions (UNICEF, 2004). The educational attainment of the population overall was also relatively high: according to the 1989 census, 11 per cent of the adult population (aged 15 and over) had higher education qualifications and another 47 per cent had gained secondary vocational credentials or completed secondary education.

In pursuit of an egalitarian ideal of society, the government opened access to education for all social groups regardless of gender, social origin or ethnicity. The system provided a range of quotas and special-entry arrangements for members of the rural population, for those directed to study by industrial enterprises or collective farms, and for those returning to education (following work experience). In spite of these measures, equal opportunity was still something of a myth, as was revealed by a number of sociological studies beginning in the Soviet period.

Research undertaken by V. N. Shubkin in the 1960s in Novosibirsk, a major educational, scientific and industrial center in Siberia, was amongst the earliest to

investigate educational inequality (Shubkin 1970). Konstantinovskiy and Shubkin (1977) highlighted a range of factors which affect access to education. Firstly, they recognised the importance of social and economic constraints on individuals' educational aspirations and choices, such as manpower needs in specific industry sectors or occupations (labour market demand in today's language) including numbers of new entrants required, selection processes, and systems of training. Secondly, they recognised the significance of the structures and processes of socialisation, such as the impact of one's place of residence, family background, peers, educational experience and the mass media. As a result one accumulates knowledge, forms views and develops attitudes. Even in Soviet times research emphasised the role of personal attributes in influencing educational goals and their realisation, including individual needs, interests, psychological characteristics and personal abilities.

Study of individuals' educational goals and plans and their actual educational histories have demonstrated that equality of opportunity in the Soviet Union was more a desirable aim than a reality, as these were dependent upon how urbanised someone's place of residence was, on their parents' educational attainment and many other factors. The Soviet system was not free of two types of disparities: disparities in attitudes towards continuing education and career plans, and disparities in educational access, that is, in opportunities to realise one's educational potential. In general, the most important factors or barriers were traditional, just as in societies that did not portray themselves as societies of equal opportunity. They were levels of urbanisation, the occupational and educational status of parents, and gender. As early as 1960 Soviet researchers noted the self-perpetuation of social groups in the USSR: workers, peasants and intellectuals (Konstantinovskiy 1999; Rutkevich 2002). Positive attitudes towards higher education and their realisation were more a characteristic of children from the families of intellectuals, specialist professionals and bureaucrats than those of workers and peasants. In addition, graduates from urban schools had more opportunities than those from rural schools. This research also found some differences in educational pathways and outcomes for girls and boys.

Subsequent analysis of educational differentiation by Gerber and Hout (1995), Gerber (2000) and Wong (2001) also demonstrated the influence of parents' educational attainment, occupational status and Communist Party membership.

The important point to note here is that special measures aimed at regulating the social composition of students at higher educational institutions failed to a large extent. The attrition rates amongst students admitted by quotas and special-entry arrangements were comparatively high, as it proved more difficult for them to reach and maintain the required levels of academic achievement (Konstantinovskiy 1999; Rutkevich 2002).

#### SEGMENTATION OF HIGHER EDUCATION IN POST-SOVIET RUSSIA

The legal basis for the policies that shape the operation of higher education are contained in the following instruments: the Constitution of the Russian Federation (1993), the Law on Education (1992 as amended 1996), the Law on Higher

Education (1996), the National Doctrine on Education (2000), the Federal Program for the Development of Education (2000), the Federal Program for the Development of Education for 2006-2010 (2005) and National Priority Project "Education" (2005).

Today the government still guarantees access for all and free education at pre-school, primary, general secondary and basic vocational education in public educational institutions. On a merit-driven competitive basis, it provides free education at senior secondary, secondary vocational, and higher vocational and postgraduate vocational level in public educational institutions where students are undertaking programs at that level for the first time. Nevertheless, social changes originating in the 1980s and 90s have led to a marked decline in equality of opportunity in Russian education. The USSR's monolithic, centralised system of education and training has been transformed into a far more segmented and diverse education system.

The economic crisis and the social reforms of the 1980s, 90s and 2000s resulted in the impoverishment of the population and immense differentiation by income. The World Bank report on poverty (World Bank 2004) stated that by 1997 almost every fourth citizen of Russia (24.1 per cent) belonged to the poorest stratum of society, and by 1999 that figure had reached 41.5 per cent. Over subsequent years the level of poverty has decreased, but still remains significant, affecting one fifth of the nation (19.6 per cent as of 2002). The report also notes a difference in the poverty levels in urban and rural areas, which narrowed to 1999, but thereafter started to widen. Disparities among the different regions of Russia also contribute to overall income inequality.

All social institutions in Russia that depended upon the government suffered from drastically inadequate public funding, and foremost among these was the educational system. Although the Law on Education mandated the allocation of not less than 10 per cent of the national income for education (until 2004), this has never been achieved. The funding levels required by the National Doctrine of Education (6-8 per cent of GDP) have also never been reached. In fact, public funding has remained at a level of 2-4 per cent of GDP. In 2003, total state expenditure on education comprised 3.7 per cent of GDP and 3.6 per cent in 2004. In the 1990s, government policy retreated from trying to resolve problems in educational funding by creating opportunities for educational organisations to tap other sources of finance. The government allowed public educational institutions to offer educational services for a fee and to lease their facilities to other bodies, and it sanctioned the establishment of non-state educational institutions operating on a fee-for-service basis. Providing tuition and other educational services for payment have become the most important sources of funding for both public and private institutions.

At present, funding for public institutions comes from government and non-government sources which usually contribute about equally to institutional budgets. At private institutions a majority of funding is expected to come from non-government sources. According to one survey of selected regions, contributions by the student population comprised 31 per cent of the total income of higher education institutions (*Ekonomika obrazovania v zerkale statistiki* 2004). Other non-government funding sources include income from private organisations, foundations

supporting science and education, revenue from educational services, and leasing facilities to outside bodies.

Consequently, the Soviet tradition of free education has been gradually receding, while an increasing number of students pay for their higher education. Overall, as of 2002, almost 51 per cent of all students enrolled in public and private higher education institutions paid for their tuition. By comparison, in 1995 roughly 9 per cent of all students in public sector institutions were paying for their education, while in 2002 just over 44 per cent were enrolled on a fee-paying basis (*Obrazovanie v Rossii* 2003). Legally, the Russian government is committed to providing places for 170 students per 10,000 of the relevant population. Currently, provision is running ahead of that at 210 places per 10,000 of the population but this does not imply a proportionate increase in per student funding. The growth of higher educational enrolments in the 1990s and 2000s is associated with an expansion of fee-paying tuition and this in turn has created a major issue of equality of access to higher education.

At the same time, during the 1990s and 2000s the role of education in Russian society changed. In the early 1990s all traditional norms, professional career paths and channels of social mobility ceased to function as they had in Soviet society. Higher educational qualifications no longer signified, or facilitated, a stable income, secure social status, social success or prestige. In 1992, for the first time ever, admissions to higher education dropped (521,000 students being admitted as against 566,000 in 1991).

Nevertheless, over the subsequent years we can see a steady growth in higher education. Since 1993, the number of students has more than doubled. As of 2004, there were 6.9 million higher education students in Russia, most of them (85 per cent) enrolled in public institutions and 50 per cent studying full-time. The number of institutions of higher learning also increased; in the public sector they rose from 519 in 1991 to 662 in 2004. The non-state higher education system established by the 1992 Law on Education included 409 institutions by 2004. The share of the 19-24 age cohort enrolled in higher education reached 43.7 per cent in 2002 (UNICEF 2004). The expansion of Russian higher education was accompanied by a growing preponderance of female enrolments: in 1993 women comprised 51.6 per cent of higher education students rising to 57.5 per cent in 2002.

Russians regard higher education as necessary for employment in higher income jobs, the jobs which are required by the new Russian economy (Dubin et al 2004). According to a national survey conducted by the Public Opinion Foundation (FOM) in 2005, the vast majority of Russians (78 per cent) now believe that it is important to obtain a higher education. A substantial majority (60 per cent) also consider it most important to complete higher education before commencing work rather than gaining some working experience and then enrolling in university (*Vysshee obrazovanie v Rossii: prestizh i dostupnost'* 2005).

The collapse of the Soviet planned economy and the transition away from a military-industrial system towards the development of a modern service sector created new occupations and consequently generated new demands for vocational training. The educational system, still centralised and static, was not able to meet the changing needs of the labour market. In a planned economy, the system of



vocational training had no need to adjust to the labour market, as the number of students in each field of specialisation was defined centrally, and every graduate had guaranteed employment (although, of course, the system did not work smoothly as it was impossible to estimate exactly the number and type of specialists required, and many had to work in positions which called for a different specialisation or lower qualifications). Currently, the government does not control employment and, by and large, most students are satisfied with the present deregulated situation as they have choices in deciding their future careers and income. An example of today's environment in which considerable disparities arise between institutional training effort and actual employment patterns concerns teacher training. According to some estimates, only 10 per cent of graduates of teacher training universities take jobs in schools because of the low salaries in secondary education, as is more generally the case throughout the public sector.

In Russia, higher education is currently seen as integral to contemporary society, as a part of everyday culture and as a symbol of social recognition. Even among groups which have not traditionally shown much interest in obtaining higher education qualifications (such as the rural population) higher education aspirations are growing and enrolment is now considered a possibility by many (Dubin et al 2004).

Recent studies show that the distinction between general higher education and specialised or professional higher education is becoming more marked (Dubin et al 2004; Veikher & Kremenitskaya 2004). General higher education relates to knowledge and skills accepted as significant but not necessarily relevant to the work, if any, a graduate might perform. Specialised training involves knowledge and skills relevant to a present or future occupation.

At present, not simply higher education qualifications in themselves, but the field of study or specialisation and the level and quality of training are critical, but the education system often fails to provide training that meets the needs of the labour market. Employers prefer to hire staff with a higher education, but realise that new employees need job-specific training as well. Students also realise that much of what they study at university will never be used in building a career. Perhaps the rise of the "practical arts" or "useful knowledge" now occurring in Western education (as well as in Russia) could find its roots in Soviet times, when higher education was intended to train workers for the national economy and there were no "liberal arts" to compete with the "practical arts".

Recent demand for a second higher education qualification could serve as circumstantial evidence of the segmentation of higher education into general and specialised divisions. Russian Centre for Public Opinion and Market Research (VCIOM) survey data reports that 44 per cent of students believe that having two higher education degrees opens up the best professional opportunities and prospects (Savitskaya 2004). But such demand could also be interpreted as representing ineffective linkage and deteriorating communication between higher education and the labour market. It could also represent a trend towards continuing education and lifelong learning. Simultaneously, there is another argument in favour of dividing higher education along generalised versus specialised lines. It should be recognised that at the age of 17 it is very hard for a school leaver to make a carefully-balanced

choice about his/her future career in the context of the quite narrowly focused professional programs available, a choice which will define the rest of his/her life. Opportunities to move between general and specialised higher education programs would therefore make good sense.

In this regard, discussion of a transition to the European Bachelor-Master degree structure (four years of study followed by two further years) versus the traditional Soviet five-year system acquires new salience. Currently, the dominant model of study is the five-year program. Of graduates in 2003, 90 per cent received specialist degrees, 8 per cent were awarded bachelors degrees and another 1 per cent received masters degrees (Vysshee i poslevuzivskoe 2004). It should be noted that the prevailing view of most students and employers is that education at the level of a specialist diploma or master's degree is necessary, since a bachelor's degree does not provide sufficient preparation. In addition, new degrees have not found appropriate recognition in labour legislation (Lukin 2006). In one way, bearing in mind the division of higher education into general and specialised segments, study leading to a bachelor's degree might be regarded as the general stage of higher education. But if this was taken to its logical conclusions, specialised higher education could then easily slip into the category of elite and less accessible education.

Mass versus elite education is yet another aspect of segmentation in the higher education system. The quality of education, the prestige of a university, the prestige of and demand for a particular field of study, high levels of selectivity and prospective financial returns from study all help define this differentiation. Access to elite education has never been entirely equal, and in the context of increasing inequalities in society at large, the gap between mass and elite education has widened.

Empirical data does not capture the separation of higher education at institutional level into mass and elite and into general and specialised (NISP). In my view, it is extremely difficult to identify and confirm such differences using quantitative means alone as such an investigation would need to take into account numerous qualitative features of educational programs, including the type of institution, its prestige, the curriculum of particular programs and its relevance to the labour market, amongst many others.

## CAUSES OF EDUCATIONAL INEQUALITY IN RUSSIA

In this section I consider major factors which act as barriers to equal access to higher education in post-Soviet Russia. Inequalities in educational access can be absolute, meaning the complete absence of opportunities for tertiary education, or they can be relative where potential students cannot obtain the type of tertiary education they seek.

Russians clearly perceive that with mass demand for higher education and the growth of the fee-paying sector, family economic status (and its connection to parental occupation) largely determines an individual's opportunities to participate in higher education (Baranov & Ivanova 2003; Klyucharev & Kofanova 2004; Obrazovanie 2003; Shishkin 2004; Zaborovskaya & Shishkin 2005). The need to

pay for an education, directly or indirectly, creates a serious barrier for low income groups in Russian society (World Bank 2004). What are the driving forces behind this situation?

Firstly, as mentioned earlier, about half the students in higher education are enrolled on a fee-paying basis, and therefore every second student must be able to pay for tuition. As a rule, fee-paying education in public institutions is preferred to that in the non-government sector as the status of degrees and quality of tuition provided by the former is generally higher.

Although the proportion of free education is still quite large, in the perception of most people admission to higher education still represents a major investment of family financial resources. According to a Public Opinion Foundation (FOM) national survey, a majority of the population (79 per cent) believes tertiary admission necessarily requires heavy expenditure by the family (*Vysshee obrazovanie v Rossii: prestizh i dostupnost'* 2005). Why?

Transition from secondary education to higher education institutions is the crucial issue. School graduation requirements differ from those for university entrance; there are two sets of examinations and two sets of requirements for skills and knowledge, despite the fact that higher education institutions in preparing their entrance examinations must take account of government guidelines for secondary education. So moving from school to university means additional tuition for entrance examinations (preparatory courses at universities and/or private classes with tutors) which call for significant financial outlays, perhaps together with the use of family social resources (networks and contacts) and further financial resources (in the form of bribes).

It is clear that higher educational institutions, experiencing as they do a lack of state funding, find additional financial support very attractive whether in the form of revenue from their own preparatory courses or as private income for individual tutors. They see no reason not to exploit these sources of income nor do they see any need for alternatives.

The transition from school to university also constitutes fertile ground for corruption. It is true that corruption in higher education existed in Soviet times, especially in regard to entering elite institutions, but certainly not to the extent that it does now. Higher education, as a part of society, cannot be free of the processes affecting society as a whole: the destruction of earlier codes of behaviour, the legitimisation and institutionalisation of new ones, and massive changes in social structures. According to Transparency International, an international organisation, Russia is in the group of countries that have the highest levels of corruption. Their 2005 rating places Russia at 129, near the bottom of the list along with other extremely corrupt countries (Transparency International 2005). The research on corruption in Russian higher education identifies the various forms corruption takes both at admissions stage and during study itself (Zaborovskaya et al 2004; Titaev 2005).

Other strategies for moving from secondary to higher education are to enrol in secondary schools which have direct links to selected universities, and to enrol in schools that generally offer a higher level of education (lyceums, gymnasiums, special schools, etc.). Access to these types of school, however, is another area of

inequality. In fact, the division of Russian secondary schools into those providing poorer or better education is one of the factors creating inequality. The quality of secondary education and the type of school attended, in addition to academic excellence, are important determinants of access to higher education (Roschina, 2004).

Both parental opinions and objective analysis of student enrolments show a relationship between family income and access to education. Income does not determine parental wishes to obtain a higher education for their children, as this is now common throughout Russian society, but income is seen as deciding the chances of actually gaining higher education. Survey data shows that 52 per cent of parents in Russia who regard their income as low believe that over the last 10 to 15 years the accessibility of higher education for families like theirs has declined. Amongst the 25 per cent of parents who regard their income as high, access to higher education is seen as either not having changed (30 per cent) or having increased (21 per cent). But even amongst the wealthiest families as many as a quarter speak of reduced opportunities (Voznesenskaya et al 2004). Data from the National Survey of Household Welfare and Program Participation (NOBUS) survey clearly demonstrate that the poor have fewer opportunities for higher education. Amongst those classed as poor, 40 per cent in the 15-35 age group receive higher education, while among the other income groups this figure rises to 69 per cent (Zaborovskaya & Shishkin 2005). Students from these income groups tend to enrol on a fee-paying basis (54 per cent) in contrast to those from poor backgrounds (38 per cent). However the costs of higher education are a much greater burden for the poor: education fees comprise 46 per cent of poor households' budgets against 27 per cent in those of other households, although the difference in the cost of tuition for these two groups is not very great (for poor households it was approximately 10,000 rubles a month in 2003, for other households 14,000 rubles).

Surprisingly, in an age of transition to mass higher education, the educational attainment of parents is not a strong predictor of children's educational attainment. In modern Russia many families with superior educational qualifications are amongst the more vulnerable groups with respect to their children accessing higher education. As higher education is becoming a more costly undertaking, employees in the public sector (in education, healthcare, etc.) face access difficulties because, although they are more educated than average, they have less than average incomes. Research shows that over recent years the chances of enrolling in a university have diminished for those whose parents are connected with education, culture, science, research and development and healthcare and have increased for those whose parents are employed in private sector business (Vasenina & Sorokina 2002).

The role of family income and social resources is also increasing with respect to accessing elite education. The chances of gaining admission to an elite university are better for the residents of Moscow and St. Petersburg, students of gymnasiums, students demonstrating the highest academic excellence, students having private tutors from a target university and the children of those with high business or bureaucratic status (top managers, administrators and so on). Access to mass, non-elite, higher education is correlated with urban (rather than non-urban) schooling, academic excellence, availability of a computer class in school (which could

indicate the quality of the school), higher education of parents, family size (which could correspond inversely to income) and attending preparatory courses at a selected university (NISP). It should be stressed that over the last 10 to 15 years the number of factors affecting access to elite higher education has grown and this can be seen as increasing social differentiation and inequality in this area.

Another barrier to equality in access to higher education is geographical location. The most vulnerable groups here are rural populations and the populations of small towns. The lower aspirations of these populations for higher education are associated with their perception that higher education is less accessible for them. According to some estimates, higher education is 1.7 times more accessible for urban residents than for rural ones (Dubin et al 2004), 1.14 times more accessible for the graduates of urban schools (compared to rural schools), and is 1.56 times more accessible for the graduates of secondary vocational institutions in urban areas (compared to those in rural areas) (Voznesenskaya 2004).

The generally lower quality of education delivered in rural schools is one of the factors contributing to this inequality (and rural schools comprise 70 per cent of all Russian schools, despite the fact that most students live in urban areas). Usually villages and small towns are too distant from large centres of population for the purpose of building links to higher educational institutions, tertiary preparation programs, and schools of "higher quality" (lyceums, gymnasiums, special schools, schools with direct connections to selected universities, profile schools, etc.).

The lower income of the population in less urbanised areas is another barrier to equal opportunity, as admission to higher education requires resources to support needed preparation for entrance examinations (all the more essential in these cases because of the lower quality of rural education) or to take up fee-paying education. In addition, rural families have to consider the costs of a child's moving to town and his/her living expenses away from home.

Even in Soviet times the allowance for students did not fully cover the cost of living, but it was then relatively higher than now and was available to everyone. In public institutions, the number of those receiving allowances has been constantly decreasing: in 1990 88 per cent of full-time students received allowances but in 2002 only 43 per cent did so. In view of the minimal size of the allowance at 200 rubles (US\$6-7), it should be considered as of symbolic rather than of real significance. In this context, the search for employment has become a part of life for full-time students, a fact which, naturally, affects the quality of their learning. On average, about half of all higher education students work (Ekonomika obrazovaniza v zerkale statistiki 2004). However, motives for working do not solely relate to financial concerns: students also want to acquire professional experience to improve their chances of gaining employment after graduation.

Given that higher educational institutions are located unequally across the country (most of them are in the European part of Russia and usually only in major cities, the capitals of the states of the Federation), living in a small town or a rural area immediately presents a barrier to higher education.

The impoverishment of the population and the high costs of education do not encourage student relocation for study, and this reinforces the regionalisation and growing localisation of educational systems. For instance, at Moscow State

University in 1999, three-quarters of first year students were from Moscow itself or the greater Moscow area (Vasenina & Sorokina 2002). The majority of school leavers still intend to study in their own region: 91 per cent in major cities, 79 per cent in medium cities, 82 per cent in small towns, 86 per cent in rural areas and 98 per cent in Moscow and St. Petersburg (Voznesenskaya et al 2004).

### IS CURRENT POLICY AIMED AT REDUCING INEQUALITY?

Affirming the need to establish a system of objective educational assessment at the secondary level and to increase accessibility of senior secondary and higher vocational education, the government of the Russian Federation has been conducting an experiment with common state-wide examinations (EGE). These aim to serve both as the final examination at secondary level and as the entrance examination at tertiary level. The proponents of the scheme believe that common subject exams will provide a unified system of management for education and facilitate the reform of higher education admission by basing selection of students on merit (i.e through exam scores). The exclusion of subjective factors (inevitable in local written and oral entrance examinations) does allow one to hope for some improvement in equality of access. In addition, exam results are expected to define the GIFO (government individual financial obligations), a system of merit-based education vouchers. Access to free higher education, and eventually the system of educational finance, will thus be transformed in accordance with the principle of funds following the student.

The first such exams were conducted in 2001 in four regions; in 2006 the program will involve 79 regions (out of a total 88 in the Federation). Still called “an experiment”, EGE now covers almost the whole country, although the GIFO has been trialed only in a few regions.

Normally, the introduction of such major change needs thorough preparation and review, but current policy seems to ignore this. A number of stakeholders, including the economists who initiated the reform of financial arrangements, argue for the economic efficiency and the social benefits of the changes (Zaborovskaya et al, 2004). But the policy lacks support from other sources and the new system has evoked great debate throughout the community. Doubts have arisen around the procedures and methods of the exams and the content of the curriculum. As an instrument of educational management, however, EGE does not seem capable of achieving the main goal set by the ministry (improved access to higher education) and because it is linked to financial issues (in the form of the GIFO) may even affect access adversely. Given that the most influential and best-resourced groups in society will have greater prospects of obtaining high quality secondary education and better preparation for exams, the new system will undoubtedly preserve existing inequalities.

EGE, designed as a system of educational assessment, although not yet fully developed and tested, only serves to demonstrate the gap in the quality of education provided by urban and rural schools (NISP) and thus merely reaffirms and highlights present disparities in educational opportunity. An analysis of the outcomes of this project over two years in the Voronezh region (Central Russia) by NISP did not

provide any definite conclusions about whether or not it increased access to higher education. The researchers relate this to the fact that EGE did not fully replace alternative entrance arrangements across the region. Its impact was also confounded by the issue, already mentioned, of disparities in educational quality between major urban and other areas. EGE could establish that a problem existed, but not resolve it. In a society where unauthorised practices flourish, however, it is difficult to expect EGE to overcome them all or be free of their effects.

To reduce educational inequality, a system of measures should be adopted to compensate for the factors that promote it. In particular, such a system would include reducing disparities in the quality of secondary education and eliminating the inequality that has been introduced by the need to pay for higher education. Clearly, the current system of free public education is not actually free and thus does not fulfill its social function of ensuring equal opportunities.

Alternative forms of educational funding for students such as loans and the provision of credit are not sufficiently developed, and existing credits are offered at rather unattractive rates: for instance, the main state bank provides credit at 19 per cent annual interest for a maximum of 11 years. The system of support for students through allowances also requires change aimed at providing not token assistance, but a real chance of meeting the costs of living. Financial support should target the most vulnerable groups so as to make up for their disadvantage.

Although recognising the importance of providing equal access to higher education, the government tends to keep reducing legal guarantees in this area and increasingly exposes higher education (including access) to market forces (Smolentseva 2005). A range of amendments to relevant legislation was made in 2004 (associated with law #122) which signaled that the government rejects a number of obligations that it previously accepted in the areas of educational funding and support for particular social groups. In general, Russian government policy aimed at reducing inequalities and improving access is still to be developed.

## CONCLUSIONS

At present, Russian society is experiencing powerful and swift social segmentation which includes strong differentiation in access to higher education. It took 10 to 20 years to change the previous system, to leave behind the free higher education to which we became accustomed over the 70-year history of the USSR, and move to a higher education system which is not free.

Social segmentation has increased in the post-Soviet period and inequality in education has become much more significant as early as at the pre-school level. The barriers at this stage are the same as at others: family income, geographical factors (the most vulnerable groups are residents of rural and less urbanised areas where the network of kindergartens is not sufficiently developed), health factors (barriers exist not only for the disabled, but also for those in poorer health) and the information parents are able to gather (Monitoring 2003; Seliverstova 2005). As early as kindergarten the same question of equity emerges: what kind of education is accessible, if it is accessible at all, mass or elite education, “bad” or “good” (the

latter offering a greater range of services but for fees)? And if “mass” and “bad” are becoming synonyms, what social functions does such education perform? These questions, of course, are identical to those that appear in analyzing the situation at the level of secondary and higher education.

It would seem that today’s educational inequalities in Russia will tend to grow, as the process does not contain any counteracting forces, governmental or societal. In this context, the position of the best-resourced groups in society will continue to be reinforced, while the position and opportunities of the weakest will continue to deteriorate. Although inequality is not officially endorsed, it is gradually becoming the norm, becoming more legitimate, more institutionalised (via corruption, for instance), more rigid, more entrenched and more persistent. In the context of mass higher education, inequality is not so much inequality in obtaining a higher education as such, but inequality in obtaining a higher education of good quality, an elite or specialised higher education. Without a set of adequate compensatory counter-measures, this situation will lead to the crystallisation of elite groups, the very sort of class inequality which Russia set out to escape from in the early twentieth century.

Gaps in public policy have contributed to the development of inequality in access to higher education and in constitutional rights to free higher education. Having minimised all the mechanisms of governance and control, and the distribution and redistribution of revenue, the state is yet to develop policy directed aimed at reducing inequality. This task ought to become an essential focus of public policy.

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## An Empirical View\*

*Roberto Fini*

## RATES OF SCHOOL COMPLETION IN ITALY

Although Italy now has a rate of attainment in upper secondary education which, for the youngest generation, is comparable to other OECD nations, this has been achieved only recently and there remain large differences between age-cohorts. As shown in Table 9.1, Italy's older generations have a much lower rate of school completion than is found in other countries and the OECD as a whole. In effect, although the differences have progressively diminished, Italy remains considerably behind on the comparative international stage.

*Table 9.1: Proportion of the Population which has Attained at Least a Diploma at Senior Secondary Level, by Age Group, 2001*

Country	Age group				
	25-64	25-34	35-44	45-54	55-64
<i>France</i>	64	78	67	58	46
<i>Germany</i>	83	85	86	83	76
<i>Italy</i>	43	57	49	39	22
<i>Japan</i>	83	94	94	81	63
<i>UK</i>	63	68	65	61	55
<i>USA</i>	84	88	89	89	83
<i>OECD average</i>	64	74	68	60	49

Source: OECD, 2003

A similar, if not worse situation holds in relation to university qualifications. Despite an increase in the proportion of young people achieving a degree-level or equivalent qualification, the average rate of attainment across OECD nations remains well above that of Italy (see Table 9.2).

\* Translated from the Italian by Tanya Nicholas and Richard Teese.

Table 9.2: Proportion of the Population which has Achieved a University Qualification, by Age Group

Country	Age group				
	25-64	25-34	35-44	45-54	55-64
<i>France</i>	12	18	11	10	8
<i>Germany</i>	13	14	15	15	10
<i>Italy</i>	10	12	11	10	6
<i>Japan</i>	19	24	25	17	10
<i>UK</i>	18	12	18	18	12
<i>USA</i>	28	30	28	30	24
<i>OECD average</i>	15	18	16	14	10

Source: OECD, 2003

In Italy, however, the tendency for the demand for extended schooling to rise seems to be the distinguishing element. In 2003, ISTAT<sup>1</sup> signalled that the rate of participation in upper secondary education might rise from 83 per cent to around 90 per cent. But when the number of secondary school dropouts and repeating students were taken into account, the rate of completion was still only around 70 per cent<sup>2</sup>. It should also be said that inter-country differences mask major regional variations in school completion rates within a country<sup>3</sup>.

Another interesting aspect concerning school completion in Italy can be explored by measuring the percentage of young people exiting from the education system<sup>4</sup>. The data demonstrate that while 90 per cent of 15 year-olds attend upper secondary school, this falls away at the end of the compulsory phase<sup>5</sup>. Moreover, the rate of attrition of 15-16 year-olds is particularly marked in southern regions and to a lesser extent in some regions of the north-west (see Figure 9.1).

1 L'Istituto nazionale di statistica (ISTAT), 2003.

2 The rate of male graduations was around 65 per cent and the rate of female graduations was around 75 per cent.

3 It follows that the objective proposed at the European Summit of Lisbon in 2000 (and re-proposed in 2003 by the European Council of Ministers of Education) to achieve a school completion rate of at least 85 per cent of young people under 22 years of age would not seem impossible for Italy, even if this would depend to a large extent on the higher rates of completion by girls. It should be noted, however, that the objective of Lisbon refers to levels of education *completed*, in other words, not simply participating in upper secondary school. Italy falls short of this objective by more than 15 percentage points. Given that the rate of graduation from secondary school has risen by less than one percentage point annually over the last five years, it will take twenty years to reach this goal, in the absence of policy interventions influencing the trend.

4 To support the observations which follow, we refer to the household survey of Italian families, conducted by the Bank of Italy. For our purposes, we have drawn on two recent years (1998 and 2000) using information contained in the datasets relating to family socio-economic status and income (with income level set by the highest-earning parent).

5 In the period of data collection of both surveys, the compulsory school age was fixed at 16 years.

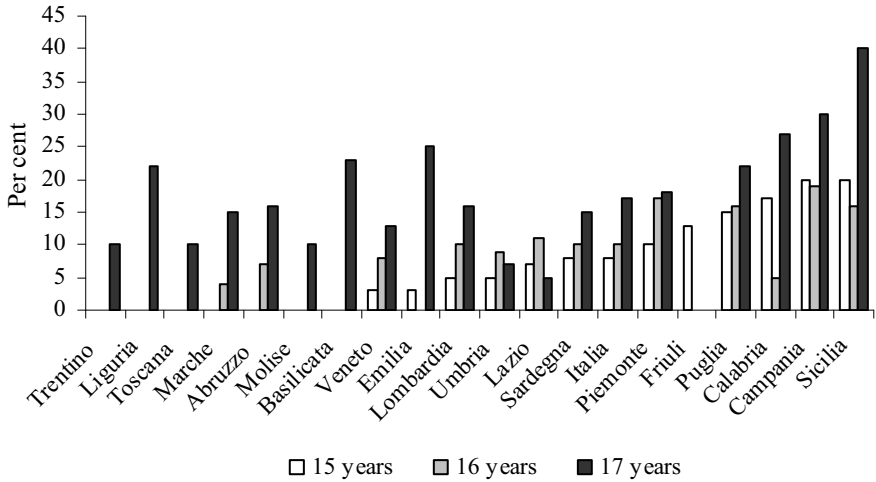


Figure 9.1: Proportion of a Cohort Quitting the School System in Italy by Region and Age

Source: Banca d'Italia, 1998-2000.

*Competency levels attained by Italian students in the international surveys*

In relation to the standards of schooling in Italy, the data presented in Table 9.3 not only reveals a system undergoing change, but one which requires attention and intervention, if there is to be any attempt at bridging some of the distance between Italy and other nations. One method of indirectly measuring the efficiency of the Italian education system is to draw on two international surveys: the PIRLS6 survey and the PISA7 survey. The results of these surveys allow the evolving Italian system

6 PIRLS is the acronym for Progress in International Reading Literacy Study. It pertains to a survey prepared by the OECD and conducted in 2001 across 15 countries. The survey was used to ascertain the reading ability of students in the final years of primary school, presumably once they had consolidated all aspects of literacy. In Italy, the second last year of elementary school (4<sup>th</sup> grade) was selected as the educational level at which reading ability would be tested using the PIRLS survey.

7 PISA is the acronym for Programme for International Student Assessment and is a survey commissioned by the OECD. The last survey was conducted in 2003 and involved the participation of 43 nations (the survey of 2000 involved 32 nations). The survey aims to measure the abilities of 15 year olds in language, mathematics and science, independently of the schooling level at which they are enrolled, so as to obtain measures comparable between the different participating nations. With regard to Italy, the sample consisted of young people in their first year of senior secondary school. Central to the testing performed through the survey of 2003 were reading comprehension, mathematical and scientific understanding and the ability to problem solve. Today PISA represents the most important and extensive of the international surveys on ability and has great importance in research on these aspects.

to be compared with education systems of other nations which have similar socio-economic structures. Table 9.3 presents data relating to reading literacy, collected in Italy in the course of the two surveys.

Table 9.3: Reading Literacy Scores of Students Aged 10 and 15 years

Country	PIRLS survey (2001) of children aged 10 years (4th grade elementary school)			PISA survey (2003) of children aged 15 years (1st & 2nd grade secondary school) <sup>8</sup>		
	Average score	First quartile	Third quartile	Average score	First quartile	Third quartile
<i>France</i>	525	481	573	505	444	570
<i>Germany</i>	539	497	586	484	417	563
<i>Italy</i>	541	496	590	487	429	552
<i>Japan*</i>	-	-	-	522	471	582
<i>UK*</i>	-	-	-	523	458	595
<i>USA</i>	542	492	601	504	436	577
<i>OECD average</i>	529	482	581	499	433	569
<i>Difference between Italy/OECD average</i>	+12	+14	+9	-12	-4	-17

Source: OECD, 2003

\* denotes countries which did not participate in the PIRLS survey.

The results presented in Table 9.3 indicate that Italian elementary school students who participated in the surveys<sup>9</sup>, achieved scores somewhat higher than the average scores achieved across all countries that participated in the survey. These data reaffirm the notion that within the Italian system of education, at least at the elementary level of schooling, instructional quality is good. However, this perspective is reversed when PISA results are examined. Here we are dealing with 15 year-olds students and for this group the Italian average falls well below that of the OECD, even if the distribution of scores is more compressed<sup>10</sup>.

Comparing the results of Italian students with those from other nations and using defined PISA attainment levels, shows that Italy has an above-average proportion of 15 year-olds in the lowest band of reading literacy (i.e. below level 1). This is not a particularly worrying result. By contrast, reading literacy ability in the intermediate

8 In the PISA survey, the literacy competencies are defined as: "Reading literacy – performing different kinds of reading tasks, such as forming a broad general understanding, retrieving specific information, developing an interpretation or reflecting on the content or form of the text".

9 For both surveys, the average score was normalised at 500 with a standard deviation of 100.

10 The smaller variance in results could be due to the positive effect of the still-substantial centralisation of the Italian education system, which tends to supply resources in mainly equal ways across the many diverse settings which make up the system.

bands (levels 1, 2, 3) places Italian students ahead of the OECD average. In the higher bands (levels 4 and 5), however, a gap opens up once again which is unfavourable to Italy (Table 9.4). This means that Italy is not achieving excellence at the highest level of reading literacy, even while performing reasonably well at intermediate levels.

Table 9.4: Percentage Distribution of Reading Literacy Ability at Pre-defined Levels

Country	Below Level 1 (335 points)	Level 1 (335-407)	Level 2 (408-480)	Level 3 (481-552)	Level 4 (553-625)	Level 5 (above 625)
<i>France</i>	4.2	11.0	22.0	30.6	23.7	8.5
<i>Germany</i>	9.9	12.7	22.3	26.8	19.4	8.8
<i>Italy</i>	5.4	13.5	25.6	30.6	19.5	5.3
<i>Japan</i>	2.7	7.3	18.0	33.3	28.8	9.9
<i>UK</i>	3.6	9.2	19.6	27.5	24.4	15.6
<i>USA</i>	6.4	11.5	21.0	27.4	21.5	12.2
<i>OECD average</i>	6.2	12.1	21.8	28.6	21.8	9.4
<i>Difference between Italy/OECD average</i>	-1.2	+1.4	+3.8	+2.0	-2.3	-4.1

Source: OECD, 2003

These ambivalent findings for Italy as a whole need to be seen in the context of regional variability within Italy and how regions line up with results from other countries. For example, the north eastern regions of Italy deliver a better performance with respect to the USA, both in relation to the lowest level of reading literacy (below level 1) and at the 'excellence' level<sup>11</sup>. Essentially, the opposite is found in the regions of the south, where more than a third of students record an insufficient level of competency<sup>12</sup>. Taking into account the fact that the rates of school completion in southern Italy are generally lower than those of central and northern Italy, a problem exists both in terms of absolute levels of formal education, but also in quality of achievement within formal education.

In reality the two phenomena tend to fuel one another. That is, poor academic performance is more likely to result in a negative final result and subsequent failure, which easily converts into drop-out. Attrition, which is relatively widespread among the different age-cohorts, weakens the cultural climate within which young people circulate and dulls the incentives to continued education and to empowerment through this. A vicious cycle is established from which escape is very difficult.

<sup>11</sup> The sum of levels 4 and 5.

<sup>12</sup> Values obtained by the addition of the relative percentages of those students below level 1, with those at level 1 and level 2.

The complex framework of education in the middle to higher reaches of the system (diploma level in upper-secondary school, degree level in higher education) thus turns out to be problematic, especially in the context of the objectives agreed upon at Lisbon. In reference to the rate of participation in upper secondary education (ISCED level 3), the Italian situation can be summarised in the following way:

- a demand for secondary education is still growing. However, this is not associated with a parallel growth in rates of attainment of diploma qualifications at upper-secondary level<sup>13</sup>: this implies that the specific objectives agreed at the European summit in Lisbon may not be attainable in the planning period (that is, by 2010);
- b the level of competency of 15 year-olds shows Italy at a disadvantage by comparison with other OECD nations; this margin seems to open up over the five-year interval between the testing of 10 year-olds in the PIRLS survey (results from which are positive) and the PISA survey<sup>14</sup>;
- c Levels of competency vary quite widely across the different areas of the country; it seems that young people from coastal regions, in particular, suffer from two types academic difficulties: an early exit from school and a lack of qualifications at the basic level.

### *University education*

The situation in Italy with respect to higher education also appears problematic, particularly regarding the percentage of school graduates who decide to enrol in university courses, but also how vocational training for careers is provided. Currently about 63 per cent of upper secondary students enter university<sup>15</sup>. Bearing in mind that each year about 70 per cent of the age-cohort of 19 year-olds graduates from upper-secondary school, we can conclude that less than one in two (44 per cent) of young Italians enrolls in university. This finding is consistent with the indicator relating the number of university enrolments to the population aged between 19 and 25 years, which is approximately around 33 per cent<sup>16</sup>.

Problematic in itself, the limited rate of transition to higher education is compounded by the fact that only 1 in 3 university students completes university studies, with the result that only 17 per cent of the total population aged 25 successfully completes university studies. As for variations between different

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<sup>13</sup> This tendency also has effects at the level of tertiary education, which is starved of an adequate supply of qualified entrants.

<sup>14</sup> The critical point could therefore be in the organisation of the school system itself which controls the passage between two levels of school over the course of five years (from elementary school to junior-secondary school) and then, after a further three years, to that of upper secondary school), with consequential issues of adjustment for teachers, repetition of the content of curriculum at transition points, how classes are formed and so on.

<sup>15</sup> As an average, between 60 per cent of males who enter university and 66 per cent of females.

<sup>16</sup> We have to keep in mind that enrolments are progressively reduced by drop-out. Moreover, staying enrolled at university for longer than a course formally requires tends to inflate the measure of participation.



regions of Italy, the situation is disturbing: graduation rates fall from 22 per cent in Liguria to 12 per cent in Sicily. It is clear that a flow of graduates as weak as this cannot make up the training gap between Italy and other OECD nations, at least within an acceptable timeframe (see Table 9.2).

A sign pointing to greater optimism comes from recent changes in university graduation rates. Figure 9.2 reports rates of university graduation, broken out separately for four- to five-year degree programs and for shorter diplomas<sup>17</sup>. From the trend in this chart, it could be hypothesised that the shortening of the duration of university studies, the simplification of teaching content and the abolition of assessment by thesis has lifted rates of success: at a national level, a little less than 60 per cent of students in four-year diploma courses graduated, whereas only 48 per cent of those who were attempting the traditional 6-year program did so.

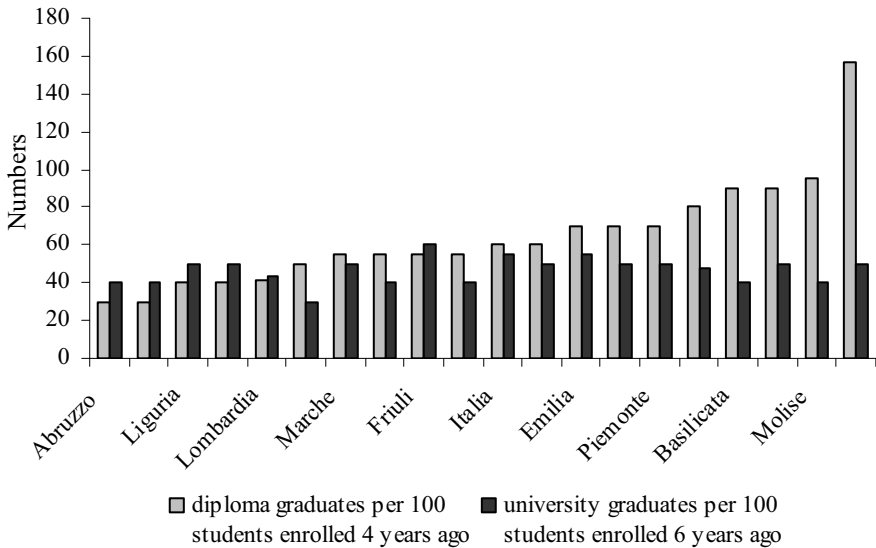


Figure 9.2: Indicators of Success of Tertiary Instruction, by Region (2001-2002 academic year)

Note: Since the initial enrolment number and the final number of completions are not from the same base, graduation rates over 100 per cent can be recorded, for example, where universities attract a high number of transfers or where a new institution or a new course opens up in a region.

<sup>17</sup> The so-called “short degrees” of two- or three-year duration were targeted by the anti-reform movement in universities. Today, the traditional diploma has virtually disappeared so that the reform of the university system which was implemented in 2001 now provides a first-cycle degree, generally of three years and a Masters (or specialist) degree involving a further two years of study. While there might seem little value in reviewing data on a system now obsolete, in fact this does present an opportunity to test the policy hypothesis that a change in the statutory regime of higher education brings about greater ‘productivity’ in the system.

It is not possible today to predict if the reform of the university system and the consequent shortening of the duration of the ordinary course of university study will lift rates of success in terms of graduation relative to initial enrolments. However, it would be reasonable to expect that the productivity of the Italian university system will increase as a result of the reform<sup>18</sup>.

*Causes and effects of the low rate of school completion in Italy*

The problem of low rates of school completion in Italy are relevant, not only to questions of inter-generational differences in attainment—for low attainment communicates a family influence from one generation to the next—but to the make-up and potential of the labour force. The Lisbon summit set the employment participation rate for the total working-age population to reach 70 per cent by 2010, and 60 per cent in the case of women. Table 9.5 makes it clear that increases in levels of education can exert a strong upward influence on levels of employment.

*Table 9.5: Rates of Participation in the Labour Market, by Gender and Level of Study, 25-64 year olds (2001)*

Country	Males			Females		
	Primary	Secondary	Tertiary	Primary	Secondary	Tertiary
<i>France</i>	76	88	92	57	76	84
<i>Germany</i>	77	84	92	50	70	83
<i>Italy</i>	74	86	91	34	67	81
<i>Japan</i>	87	95	97	56	63	68
<i>UK</i>	67	88	93	51	77	87
<i>USA</i>	75	86	92	52	73	81
<i>OECD average</i>	77	88	93	50	70	83
<i>Difference between Italy /OECD average</i>	-3	-2	-2	-16	-3	-2

Source: OECD, 2003

Indeed considering that among the possible determinants of the decision to engage in further education is the prospect of major gains and minimum risks of unemployment, it is a common characteristic of market economies that rates of participation in the labour market rise with the number of years of education attained by the population. This is also the case with Italy where, however, there is a somewhat weaker incentive experienced by women as compared to men. In fact, looking at rates of unemployment by level of study (Table 9.6), educated Italian women with the same level of qualification face a much weaker prospect than men of finding work.

<sup>18</sup> It is still possible, however, that levels of university graduation are constrained by relatively low numbers of young people graduating from secondary school.

Table 9.6: Rates of Unemployment, by Gender and Level of Study – 25-64 year olds (2001)

Country	Males			Females		
	Primary	Secondary	Tertiary	Primary	Secondary	Tertiary
<i>France</i>	9.7	5.1	4.1	14.4	9.3	5.6
<i>Germany</i>	15.6	8.1	3.4	11.5	8.4	4.4
<i>Italy</i>	6.9	4.9	1.8	14.0	9.3	7.2
<i>Japan</i>	6.9	4.8	2.8	4.3	4.7	3.1
<i>UK</i>	9.4	4.1	2.0	5.7	3.7	1.9
<i>USA</i>	7.5	4.2	1.9	8.9	3.4	2.0
<i>OECD average</i>	8.9	4.8	2.8	9.4	6.4	3.5
<i>Difference between Italy /OECD average</i>	-2	+0.1	+1	+4.6	+2.9	+3.3

Source: OECD, 2003

If we can affirm that weaker attainment in medium to higher levels of study (upper secondary and university) and lower participation in the labour market are related, it is a more difficult matter to determine the direction of this relationship, bearing in mind that individual expectations of the future govern decisions in the present. Moreover, at any given level of qualification, the quality of education and actual level of achievement of an individual will influence their success or lack of success in the labour market. While measuring the effect of one additional year of education is neither simple nor unambiguous in results, it is not going too far to say that in OECD countries the additional year will boost wages by between 5 per cent and 10 per cent on average<sup>19</sup>.

Can we draw any conclusions from this analysis with regard to how well the Italian education system works? As a first instance approximation, it is possible to argue that the problem of boosting education levels in the population can be tackled on two fronts:

- (a) extending the period of formal instruction, that is, the strategies for retaining individuals for a longer period of time at school;
- (b) improving quality of education, that is, making the time spent in classrooms more productive.

The first line of attack has received and continues to receive prominence in the thinking of policy-makers (even if the effectiveness of the policies that have been implemented leaves some room for doubt). But the second line of approach has received comparatively little attention. From the outset, PISA results help focus our interest on both lines of approach.

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<sup>19</sup> Generally this premium would be justified as a higher input of human capital, which translates to greater productivity on the part of the individual worker.

*The differentiation of results in terms of achieved competencies*

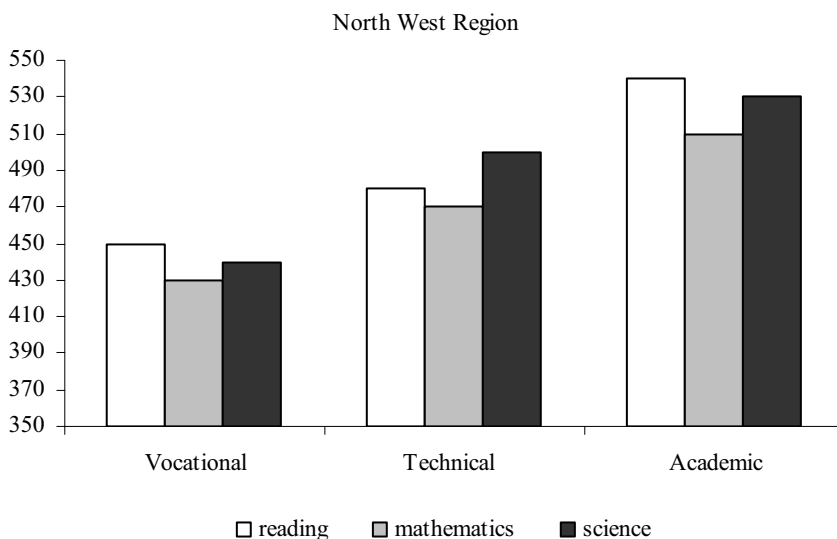
To begin with, we verify levels of academic performance in three areas:

Language (reading literacy)<sup>20</sup>, mathematics and science. The PISA survey attributes a score to each group of tests and the points obtained are normalised to yield an average across all the nations participating in the survey equivalent to 500 and a standard deviation of 100. In the following figures (Figures 9.3 to 9.7), the median values<sup>21</sup> of the results obtained by students in the three areas of study are reported, disaggregated by type of institute attended and by region.

Although analysis of the data reveals no surprises for anyone familiar with the Italian education system and socioeconomic levels of regions, it is precisely this lack of ‘anything new’ which makes it opportune to highlight the findings. In sum, the relevant findings are:

(a) students attending academic high schools consistently record better results than those in technical schools, while students in vocational establishments have the lowest scores;

(b) within this pattern, students from the northern regions achieve results significantly higher than those in the south.



*Figure 9.3: Median Scores in the Three Areas of Study by Type of School—North-West Italy*

<sup>20</sup> Summing across measures of an individual’s capacity to retrieve information from a text (capacity to retrieve), their ability to interpret arguments contained within the text (capacity to interpret) and their ability to reflect and evaluate the arguments presented in a text (capacity to reflect and evaluate).

<sup>21</sup> That is, the values above and below which 50 per cent of students are found.

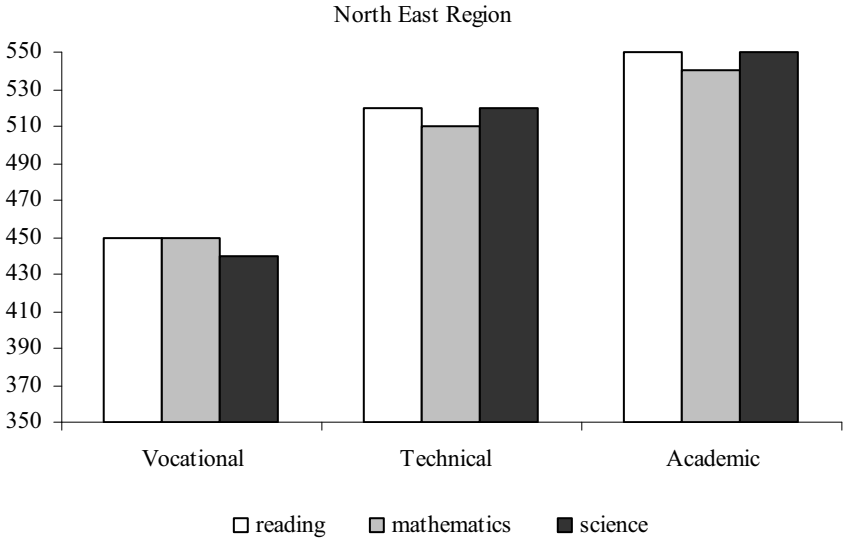


Figure 9.4: Median Scores in the Three Areas of Study by Type of School—North-East Italy

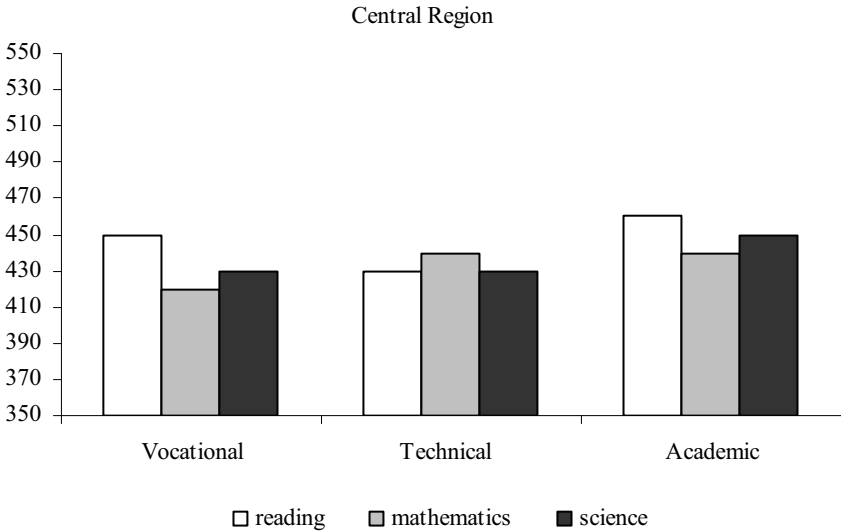


Figure 9.5: Median Scores in the Three Areas of Study by Type of School—Central Italy

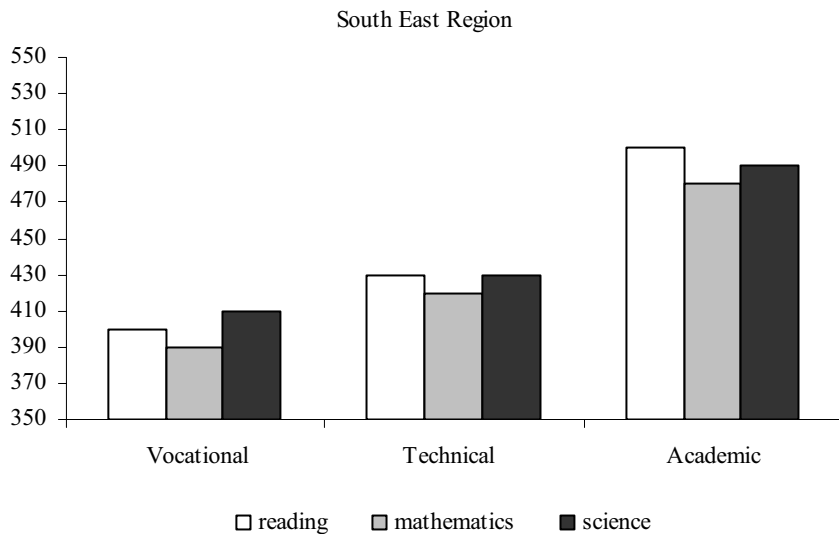


Figure 9.6: Median Scores in the Three Areas of Study by Type of School—South East Italy

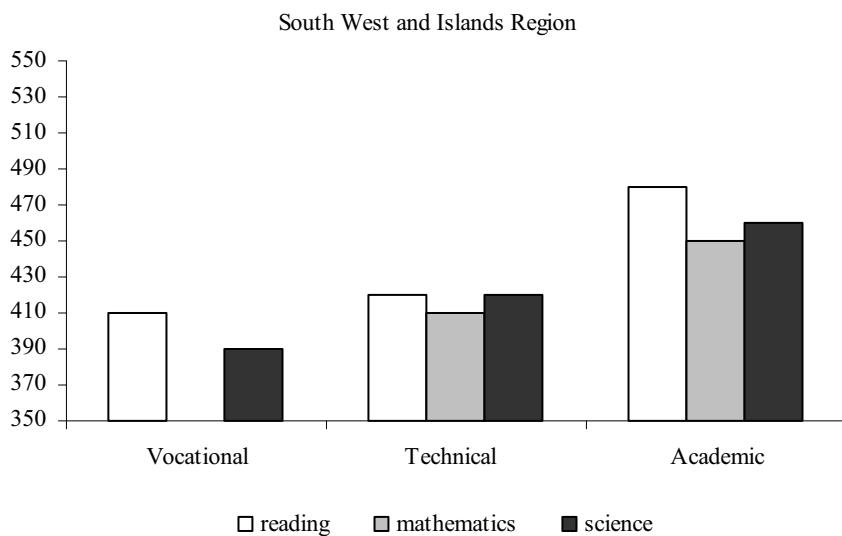


Figure 9.7: Median Scores in the Three Areas of Study, by Type of School—South West Italy and Islands

*Reasons for choice of school*

Our last observation on regional differences needs some qualification. Analysing the distribution of scores within each type of school (academic, technical, vocational) shows a wide overlap in performance. Reaching a threshold of ‘excellence’, or on the other hand recording very poor results, can be found in any type of school attended. To make this clearer: we can set a threshold equal to 400 points, for example, below which results are very weak, and another threshold at 600 points, to represent high achievement (‘excellence’). Grouping the results of students on the basis of these criteria gives us the following table<sup>22</sup>.

*Table 9.7: Distribution of Reading Results on the Basis of Type of School Attended and Upper and Lower Thresholds of Competency (per cent)*

	600 points or above	400 points or less
<i>Secondary schools</i>	22	2
<i>Technical colleges</i>	7	11
<i>Vocational colleges</i>	2	22

Source: Additional analysis of PISA survey results, 2003

These results reveal a situation which is more complex than at first sight. Certainly, it remains true that the best results are obtained by those students attending academic secondary schools, while the poorest results are the privilege of students in vocational colleges. But, on the other hand, the two per cent of students receiving 600 points or more from vocational schools would not be out of place in an academic secondary college, seeing that they achieve a level of competency higher than two-thirds of students in academic establishments. Conversely, the two per cent of students in academic schools with unsatisfactory marks would find themselves in good company in a vocational college in that they have attained results lower than two-thirds of students enrolled in these establishments.

Such an analytical device proves its usefulness by inviting the question as to the processes which govern choice of secondary school on the part of students and their families. To use a very effective dichotomy<sup>23</sup>, we can distinguish between a decision based on intrinsic preference (e.g. “I feel inclined to take on this type of study”) and therefore an option of the “love of learning” type from a decision which appears to be externally conditioned or imposed (e.g. “people like me can only finish school in this kind of program”), an option in which restrictive elements prevail and therefore “must” be adopted.

That options are related to family background will be apparent from Table 9.8.

<sup>22</sup> The table has the advantage of allowing us to view achievement levels, controlling for type of school attended.

<sup>23</sup> Cf. the analysis in Gambetta (1987).

Table 9.8: Percentage Student Distribution by Parental Level of Education and Type of School Attended (2000)

Highest level of education achieved between both parents	Vocational College	Technical College	Academic College
<i>Illiterate</i>	49.23	43.66	7.11
<i>Completed primary school (ISCED 1)</i>	40.09	43.60	16.31
<i>Completed first half of secondary school (ISCED 2)</i>	36.74	44.29	18.97
<i>Completed a technical or vocational diploma (ISCED 3 b-c)</i>	32.09	44.98	22.92
<i>Senior secondary school certificate (ISCED 3 a)</i>	17.47	43.03	39.49
<i>University educated (ISCED 5-6)</i>	10.94	26.14	62.92
<i>Total within the sample</i>	24.02	40.03	35.95

Source: PISA, 2003

The data presented in Table 9.8 show us that if both parents were illiterate, their child would have almost a 50 per cent chance of enrolling in a vocational school, while on the other hand, if at least one parent has a degree-level qualification, the probability of completing school in an academic secondary college is around two-thirds (62.9 per cent). The statistical evidence leads us to say with a high degree of confidence that choice of school type is no longer conditioned (or conditioned to only a very limited degree) by gender. On the other hand, factors such as level of education achieved by parents are crucial for the choice between academic secondary college and other types of school. The majority of parents with higher levels of qualifications are more inclined to send their children to academic secondary school, though parental education has no statistically significant effect on the decision to choose between a technical as compared to a vocational college.

Another significant factor favouring enrolment in one type of college over another is socioeconomic status<sup>24</sup>. This is more important than the family wealth<sup>25</sup> in the decision of families to take the academic path. When students are asked where, in career terms, they would like to be at age 30, the nominated occupation can be scored in prestige terms and we can derive a measure of association between the aspired level of occupational status and the socioeconomic status of the student.

<sup>24</sup> Measured by the variable HISEI in the PISA dataset. The OECD researchers have used an index of prestige associated with the occupational scale developed by Ganzeboom *et al.* (1992)—International Socio-Economic Index of Occupational Status. Some indices take into account the higher of two occupations of a set of parents.

<sup>25</sup> Measured by the variable WEALTH from the PISA dataset. This variable is constructed from information on the availability of a room specifically for children, a dishwasher, educational software, internet connection as well as multiple mobile telephones, television receivers, home computers, cars and baths in the home, and therefore forms an indicator which is much more precise and meaningful than family income.



As Italy is a country which is generally seen to have low inter-generational mobility, it would be reasonable to expect that the link between the occupation aspired to by the student and the occupational status of the students' parents would be a tight one. But in reality the link is rather weak. Thanks to this very low correlation, it is also possible to use the level of aspiration of individual students as a variable to explain scholastic choices. In fact, it does contribute to predicting enrolment in a vocational school, but does not differentiate in any significant way between enrolment in a technical as distinct from an academic secondary college.

Lastly, we should take into consideration two other related factors which affect a child's academic future: educational support with school work at home<sup>26</sup> and the availability of educational resources at home<sup>27</sup>. These factors of home support for learning, negatively distinguish students in vocational schools but do not differentiate between students in technical and academic establishments. Or, to be more precise, family support is stronger among students in technical schools, while educational resources at home distinguish students in academic schools.

Summarising aspects bearing on the relationship between family background and linguistic competency of students according to type of secondary school attended, we can affirm that these depend in good measure (although not entirely) on family environment: crucial to determining type of school attended are the material and cultural resources which families are able to secure for their children. In particular:

- (a) material resources, above all, availability of space and of study materials;
- (b) cultural resources which influence not only academic performance in the strict sense, but also levels of aspirations as well.

#### *What influences levels of achievement?*

The flow of students into different types of secondary school inevitably raises a key question: what are the scholastic attributes which differentiate between courses to the point of producing a distinctive pattern of learning outcomes? We can scarcely avoid this question, not only because of the need for completeness in our research perspective, but because of the potentially profound policy implications.

Table 9.9 reports averages for each type of school on a series of variables which contribute significantly to the explanation of student performance.

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<sup>26</sup> Measured by the variable FAMEDSUP from the PISA dataset. This provides an indication of the frequency with which parents or siblings assist a student with schoolwork in the home.

<sup>27</sup> Measured by the variable HEDRES from the PISA dataset. This variable is constructed from the responses gathered in relation to the presence of a dictionary in the home, a quiet place to study, a table which is generally dedicated to study, textbooks, etc.

Table 9.9: Characteristics of School Type by Indicators of Quality (2000)

	Vocational school		Technical school		Academic School		Whole sample	
	Mean	Std. dev	Mean	Std. dev	Mean	Std. dev	Mean	Std. dev
<i>Socio-economic indicators (average)</i>	41.40	4.40	46.26	3.91	55.77	5.56	48.47	7.41
<i>Parental level of education (average no. of years)</i>	10.49	1.06	11.54	1.01	13.85	1.40	12.11	1.79
<i>School size (number of students)</i>	639.63	355.90	862.14	455.02	764.20	341.14	772.12	402.41
<i>Students per teacher</i>	7.51	1.40	8.35	1.57	11.04	2.08	9.16	2.30
<i>Student behaviour (as seen by school principal)</i>	-0.30	1.00	-0.05	0.83	0.78	0.83	0.19	0.98
<i>Discipline climate (student view)<sup>28</sup></i>	-0.51	0.29	-0.33	0.34	0.06	0.32	-0.23	0.39
<i>Attitude of teachers (average)<sup>29</sup></i>	-0.14	0.26	-0.16	0.28	-0.16	0.36	-0.16	0.31
<i>Pressure to succeed (average)<sup>30</sup></i>	0.28	0.24	0.42	0.21	0.38	0.25	0.37	0.24

Source: PISA, 2000

Notes: for footnotes 28-30, see page following

Some of the data reported in Table 9.9 simply confirm findings we have already encountered. For example, the academic secondary schools are characterised by a high social level of intake, with parents being better educated on average and/or employed in more prestigious occupations. We can expect these factors will exert a positive effect on academic results. The technical colleges are, on average, large establishments as compared to the other types of school. Vocational schools display weaker student-teacher relationships.

These last two variables represent indicators which are, at least in respect of the “size” variable, counter-intuitive influences on scholastic attainment. Both, in fact, are positively correlated with student results. Larger establishments and schools with a higher reported quality of student-teacher rapport record above-average scores.

The PISA survey makes available additional areas of information relating to social relationships in school, disciplinary climate and the perceptions of students and teachers. Naturally this information must be treated with caution as it is based on subjective assessments. However, the results signal that the discipline regime (as perceived by both school principal and students) is more rigid in academic secondary schools by comparison with other types of schools. Disciplinary climate is correlated positively with the levels of achievement in reading literacy and in the mathematics and science domains as well. But we do not find comparable statistical effects on achievement in respect of student-teacher rapport and pressure on students to succeed.

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28 This relates to the variable *STUDBEHA* from the PISA dataset. This indicator concerns the perception of the school principal of student behaviour on such matters as absence from school, interruptions to classroom activity, lack of respect for teachers, drug and alcohol use, bullying and illegal activities. The manual of PISA data notes that this variable is constructed so that high values mean an unsatisfactory discipline climate.

29 Measured by the indicator *DISCLIMA* from the PISA dataset. This is a variable which addresses discipline from the perspective of the student and is constructed across responses to questions regarding behaviour including: the teacher has to wait a long time before students settle down, the students don't listen to what the teacher says, the students don't work well, the students don't begin to work immediately class has begun, there is a lot of noise in class. A high value on this indicator means a particularly negative situation.

30 Measured by the indicator *STUDREL* from the PISA dataset. This concerns student attitudes to teachers and is constructed from elements such as—students get along with their teachers, most teachers take an interest in the wellbeing of the students, most teachers are interested in hearing what students have to say, students can get additional help from their teachers if they need it. A high score means students have a positive perception of their teachers.

31 Measured by the variable *ACHPRESS* from the PISA dataset. This draws on questions relating to the academic emphasis in a school—the teacher wants us to take schoolwork seriously, the teacher says students can do better, etc.

At the conclusion of this analysis of the determinants of student achievement based on PISA results, it is possible to affirm that if, ideally, we could achieve an equality of opportunity which involved family environment (in terms of family educational level, occupational status and also behavioural orientations towards children) and school environment (social composition of the student body, attitudes of teachers to students), the diversity in student achievement across different types of schools would be practically neutralised.

In this ideal situation any remaining differences in capacity could be attributed to the natural distribution of ability. But of course this is not what happens. The three-way split between types of secondary colleges allows self-selection of students, based on family characteristics. It is likely, too, that self-selection also occurs amongst teachers and that this has effects on achievement differences. Teachers who are more capable or more motivated professionally prefer to teach in academic secondary colleges. This situation risks creating a fatal reinforcement of discrimination to which young people from disadvantaged families are most exposed.

## CONCLUSIONS

Reviewing the ground that we have covered in this paper, we offer a number of observations which the data would appear to support:

(a) firstly, Italy is characterised by shortfalls in achievement at upper secondary and tertiary levels, both in quantitative terms (years of instruction achieved) and qualitative terms (achievement of competencies);

(b) these shortcomings in participation and achievement appear in the course of upper secondary education, but extend into the university sphere, as reflected both in the low number of graduates from university and in results which are neither brilliant nor, for that matter, especially negative;

(c) turning to the achievement levels of 15 year-olds (the focus of the PISA survey), results are clearly and consistently differentiated by type of secondary school attended and by place of residence;

(d) regarding the acquisition of competencies, this hinges at an individual level on family environment (not only parental education, but also support factors, such as the presence of books in the home, of cultural activities, etc).

With regard to school-level factors, it can be shown that when educational resources are taken into account, discipline climate in a school exercises a far greater impact on achievement than do organisational factors.

All of this brings us to an important conclusion. From the moment that the distribution of student achievement in large measure reflects family background—a factor also largely responsible for type of secondary school attended—we can conclude that the social distribution of qualifications does not represent an efficient selection from the perspective of how human resources are allocated. Thus the Italian school system displays a number of significant limitations:

(a) the differentiation of types of school contributes in a decisive way to maintaining a high level of social stratification and a low level of inter-generational mobility;

(b) as a result, the credentials sanctioning completion of study do not in fact signal achievement solely through the efforts of students themselves;

(c) this may help explain why, in turn, Italian employers do not seem to base their decisions about hiring and paying on the awards granted to students.

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# 10 Persistent Inequalities in Uruguayan Primary Education 1996 – 2002\*

*Tabaré Fernández Aguerre*

## INTRODUCTION

Since the end of the nineteenth-century, education has been the most important political axis of social development and the building of citizenship in Uruguay, guided by the ideal of equality of opportunity. By comparison with the Latin American region as a whole, the institutionalisation of schooling began quite early (1876), with the State creating a centralised system based on the principle of free and secular instruction and covering initial (4-5 year-olds), primary (6-11 years), lower secondary (12-14) and upper secondary (15-17) school as well as university education. With the Constitution of 1966, a period of ten years of schooling became compulsory. The State has always been the main provider of education at all levels, with enrolment in public primary schools in the past thirty years stable at 85 per cent. Through the government educational bureaucracy, the State designs the official curricula, exercises a legal monopoly over accreditation and initial teacher training, authorizes the official textbooks, establishes the school calendar, and is practically the only investor in and financier of education.

By regional standards, the achievements of the Uruguayan system are outstanding, at least in aggregate terms. Along with Argentina, Chile, Cuba and Costa Rica, Uruguay has the lowest rate of illiteracy in Latin America. Moreover, by the late 1940s, it had achieved almost universal access to primary education and, in the 1960s, universal completion or graduation (CEPAL 1990; 2005). By 1990 – before the reform programme which is the object of this study – some 77 per cent of five-year-olds from larger population centres (those with at least 5,000 people) were attending school, while 51 per cent of four-year-olds were also enrolled.<sup>1</sup> The economically active population had undertaken 8.6 years of schooling on average, a rate close to Argentina's, but exceeded by Chile and Costa Rica.

However, by the beginning of the 1990s there was a broad consensus that the Uruguayan educational model was in need of reform. This conclusion was first reached in 1964 by one of the studies conducted by the State Commission for Investments and Economic Development [Comisión de Inversiones y Desarrollo Económico del Estado] (CIDE). The main conclusions of this study were reiterated 30 years later in an analysis by the Economic Commission for Latin America

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\* Translated from the Spanish by Sergio Riquelme and Suzanne Rice.

<sup>1</sup> Our own analysis based on the Encuesta Continua de Hogares del Instituto Nacional de Estadísticas (Ongoing Household Survey of the National Institute of Statistics).

(CEPAL). By the end of the 1980s, lower secondary education was still restricted to the major cities, without any rural coverage similar to that seen for primary education: at this time, only 61 per cent of youth between 13 and 17 years of age attended an educational centre (CEPAL 2005: Table 29). A fall in per capita student funding during the sixties had been aggravated by both the military dictatorship (1973-1985) and the economic recession (1982-1985). Further reductions were associated with the macroeconomic neoliberal policies implemented in 1990. In that year, public spending on education was 2.2 per cent of the GDP and remained at this level until the mid-1990s (CEPAL 2005: Table 44). The ECLA identified important inequalities in student outcomes, at primary level but even more so at secondary. Standards were low: after 12 years of formal education only 6.3 per cent of students assessed in 1994 reached a satisfactory level in both mathematics and reading, although the figure increased to 20 per cent of those enrolled in the private sector (CEPAL 1994). Together with the poor quality of teaching and learning, results were skewed according to students' social class, making a mockery of ideals of equality. Finally, there was broad agreement about the existence of multiple inertias in educational institutions blocking the innovations necessary to enable the system to deliver the linguistic, mathematical and scientific competencies required by a thriving economic and cultural global society, characterised by the intensive use of knowledge (CEPAL 1991, 1992 and 1994).

Between 1995 and 2004, the National Ministry of Public Education (ANEP) implemented a reform programme for public primary education partly funded by the World Bank and the Inter-American Development Bank. This paper aims to conduct an initial evaluation of the impact of these reforms on quality and inequality of learning. My analysis seeks to answer three questions: Did the quality of primary education improve over the period 1996-2002? Has the unequal distribution of learning outcomes according to students' social class and sex been modified? And finally, can any of the changes identified be attributed to the reform programme?

## THE REFORM OF EDUCATION (1996-2004)

### *Overview*

A noteworthy characteristic of the programme established in 1996 is that it was designed and implemented as a reform *by the State* in order to improve *public* education services. From the very beginning, the notion of any free market element as a policy alternative was discarded, whether in the form of subsidies to enrolments at private schools or through the private management of services. It was not a "neoliberal" reform in spite of the fact that some unions labelled it in this way (FENAPES, 2003). In this, Uruguay differed from other Latin American countries and was in direct contrast to Chile, for example. As Filgueira and Martinez (2004:150) note in a comparative study of South America:

The reforms taking place in Uruguay are the antithesis of the minimalist State; they reaffirm the public character of education, favour the centralisation of the educational system, and do not allow space for the

experimental games, private autonomies or “public-private mix” modalities frequently encountered [elsewhere].

The reform programme was started during Sanguinetti’s administration (1995-1999) and continued during Battle’s administration (2000-2004); both governments were paradoxically supported by a centre right-wing coalition. Despite this continuity, between 2000 and 2001, there were changes in strategy and objectives, in part as a result of the replacement of German Rama, the central reformist figure. For this reason, the reform programme has been described as transitory. In 2005, the education authorities that took office with the new left-wing government suspended the application of virtually all the reforms.

The programme proposed four general objectives for the national system of education, namely: 1) to improve social equity, considering that 40 per cent of children and youth belong to the lowest income quintile; 2) to raise the level of teachers’ education and the status of the teacher’s role by providing training to current teaching staff; 3) to increase educational quality by developing human resources and improving service delivery; and 4) to strengthen the institutional management that supports the three previous objectives (ANEP 1997: 7-8).

Specific objectives were designed for each level of the educational system. In this way, broad policy strategies were combined with more specific and focused ones. Table 10.1 presents an outline of these objectives:

At the same time the political strategy for implementation was adapted to individual institutions at each level of the system and to the stance of the teacher unions. In the case of the Council of Primary Education (CEP), the policy to provide universal coverage, together with more specific policies, depended on the tacit consent of the Uruguayan Teachers’ Federation (FUM). Primary education policies were implemented by the State bureaucracy, with a lesser role played by technical staff contracted by the World Bank through the Project for the Improvement of Primary Education (MECAP). With the Council of Secondary Education (CES), the new Basic Cycle (or Plan 1996) was mainly developed with funds from the Inter-American Development Bank, by means of an ad hoc structure called the Programme for Improvement of Secondary Education and Teachers’ Education (MESYFOD), in the context of major confrontations with the Teachers’ National Federation (FENAPES 2001). The educational bureaucracy’s participation came later, and was generally restricted to implementation rather than the design of reforms. Finally, the Council of Technical and Professional Education (CETP) deployed a strategy of ad hoc agreements with the Officers’ Association (AFUTU). This strategy facilitated the gradual modification of the bureaucratic structure; senior management roles and culture were redesigned, with progressive changes in supervisory styles and school management. The BT (Technological Baccalaureate, a vocational qualification for senior secondary students) was also created, which provided a technical credential formally equal to the general academic credential provided by the CES.



Table 10.1: Diagram of the Reforms Implemented in Uruguay 1995-2005

	Preschool	Primary	Lower secondary	Upper secondary	Initial teacher professional development
<i>Universal strategies</i>	Universal coverage for 4- and 5-year-olds New curriculum Construction of schools	Free text books Local selection of school inspectors and principals Implementation of an external evaluation system	Free textbooks Basic cycle 1996 New school model Construction of new schools	Technological baccalaureate Pilot Baccalaureate Plan 2003 Construction of new schools	Regional Teachers' Centres
<i>Focused strategies</i>	Preschools for disadvantaged children (with free meals and longer hours) New school model (called JICJ)	Teacher professional development on reading Additional educational resources Full-time schools program Free meals and clothing			Teaching Practice Schools in disadvantaged areas

*Reforms in primary education*

The primary education reforms utilised a combination of strategies with managerial, curricular and formative objectives; the approach was systematic, and incorporated global as well as more specific strategies. From these it was possible to discern implicit, long-term secondary objectives that were often more important than the declared short-term aims.

Among the specific policies one of the most important was the Training Programme for Teachers in Service, aimed at those working in highly disadvantaged and disadvantaged schools; this was implemented from 1997. The objective was to stimulate the creation and consolidation of staff team work in schools using shared pedagogical projects. The projects were focused on language, and on the problems associated with the acquisition of literacy skills amongst indigenous children from poor families. In policy terms, it broke new ground by requiring participating staff to attend fortnightly update conferences with external teaching consultants. In theoretical terms, it recast pre-existing individual incentives, designed to attract and retain the most experienced teachers in the least desirable school contexts.

The Full-Time Schools Programme (ETC) was the best received of the reforms and it should be noted that, of the countries in the region, only Chile has a comparable policy. It began in 1997 with a re-orientation of the "Pedagogical Proposal for Full-Time Schools" program<sup>2</sup>. Using this framework, each full-time school (ETC) had to set its own educational goals and programs. With funds from the 1995-2000 Budget and a loan from the World Bank, urban schools in poorer suburbs offering a four-hour teaching programme had their programs extended to six and a half hours per day. The objective over six years was to extend coverage to the poorest children, who constituted 20 per cent of the primary cohort. In 1999, three educational consultancy teams were established to support schools in mathematics, language and sciences so that they could develop the additional classes to complement the standard primary curriculum. From a start of 55 ETCs, by 2002 there were 91, with students attending the 6<sup>th</sup> year (ANPE-PEA 2003). Currently, in 2006, the new education authorities are considering the extension of the programme under the guidelines established in 1997.

*The private sector and the reforms*

The national education authorities did not intend to extend the reforms to the private sector, nor were private organisations invited to implement aspects of the projects. In fact, the private sector showed no interest in participating. For example, there were no private schools that implemented an integrated curriculum at the primary level or adopted the 1996 Plan for the Basic Cycle of Secondary Education. The Uruguayan Catholic Education Association (AUDEC) denounced the reforms, in part because it believed curriculum changes clashed with Catholic teaching on human nature, and in part because the reforms did not introduce government subsidies for private schools (FENAPES 2001). At the level of Initial Education,

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2 Please refer to <http://www.mecaep.edu.uy/hprincipal.exe?1.30,20,0,0,0>

private preschools continued working much as they always had, and have only recently complied with the new regulatory norms (2005). Only two private secondary institutes implemented the “Technological Baccalaureate” Programme. Some private secondary schools made the decision to extend the standard school day, but without any particular reference to the “Pedagogical Proposal for Full-Time Schools” policy and, although there is no current research in the area, it seems likely that most of the schools have extended the day with a mixed bag of offerings: sports, English, IT, study skills workshops, supervised homework sessions, etc. A few would have made the change to a bilingual curricular programme (Spanish in the morning and English in the afternoon).

## HYPOTHESIS AND MODEL

### *a) Estimating impacts through student learning outcomes*

The main objective of the research described in this paper is to determine whether impact of social class and gender upon learning outcomes has changed, as indicated by partial regression coefficients. If levels of inequality have changed, different coefficients should be observed for the years of 1996, 1999 and 2002.

However, the longitudinal comparison of the structure of learning determinants presents the challenge of making valid causal inferences based on cross-sectional measures where experimental methods cannot be used. In Latin America such an endeavour is only possible in the few countries where technically sophisticated assessment systems have been established, and where analysis can therefore be regularly carried out and published (Ferrer, 2005; Ravela, 2001; Fernandez & Midaglia, 2005). Three Latin American countries other than Uruguay have such systems.

Chile is the first of these. From 1987, Chile has had a rigorous Measurement of Quality Education System (SIMCE) which aims to provide objective information to facilitate decisions made in the educational marketplace, whether by families or by educational providers. In the period to 2006, Chile developed six assessment reports on learning that compare the results obtained by two cohorts of students separated by at least 3 years<sup>3</sup>. The first assessment compared 4<sup>th</sup> grade students [4<sup>o</sup> Basico] in 1999 and, although margins of error were not reported, the analysis indicated that there had been no improvement in learning outcomes. The final year of primary school (Year 8) was assessed twice, in 2000 and in 2004. Neither assessment indicated learning improvements at national level in Spanish or mathematics. The only exception was in 2004 when the mathematics score improved for those students attending upper middle-class schools (SIMCE 2004). However, all the analyses use the same methodology: a test of hypothesis based on the difference of non-adjusted means.

In 2005, Mexico presented for the first time a comparison of the results obtained by Year 6 students in 2000 and 2005 (INEE 2005). There was a significant increase

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3 Refer to the SIMCE webpage: <http://www.simce.cl>

of 27 points in reading comprehension scores and 17 points in mathematics scores over this period. This improvement held in both subjects for students attending urban public schools and private schools and for indigenous students. In rural public schools reading comprehension performance improved. From a statistical point of view the analysis used a test of non-adjusted difference of means.

In 2004, Peru, together with an overall evaluation, made an initial comparison of primary (Year 6) students' performance using performance in 1998 as a benchmark. According to the report published by the Unit for Quality Assessment<sup>4</sup> there was no significant difference in learning outcomes in either language skills or mathematics.

Finally, in 1999 and 2002 Uruguay presented reports comparing the Year 6 students' results with those obtained in 1996. In contrast to Chile and Peru, and in line with the Mexican experience, an improvement in student outcomes over the period was found. The 1999 report indicates that in both language and mathematics there was an increase in the proportion of students reaching the required standard, and this exceeded the computed sample error margin. When results were analysed according to schools' socio-cultural contexts, the improvements were found to hold only for the most disadvantaged group of schools (UMRE 1999: 25, 29). In the 2002 report, improvements in both language and mathematics that exceeded the error margins were identified. Improvements in language outcomes were evident in schools in average, disadvantaged and severely disadvantaged contexts, while all schools, except the most socially advantaged, demonstrated improvements in mathematics (PEA 2002: 21, 29, 30).

In all countries in the region where results were compared, the test of hypothesis of differences in non-adjusted averages was applied as the statistical instrument for independent samples. This introduces a fundamental problem. It is well-known that social indicators explain an important part of the cross-sectional variance in learning outcomes. The argument can be extended to comparing results across time. When averages are not adjusted, it is impossible to determine if improvement or even lack of variance is in part produced by a change in the students' social profile. In spite of experiencing periods of economic recession, all the countries discussed have reported improvements in poverty indicators as well as in consumption levels and schooling coverage. These are long-term trends and for that reason are likely to constitute "historical effects".

#### *b) General hypotheses*

In general, policy studies indicate that reforms can bestow incremental improvements on their beneficiaries and political gains on their executors, but such benefits depend strongly on continuity of implementation between successive administrations (Kaufman & Nelson 2005).

On these grounds, the first and simplest general hypothesis is that, given the specificity and the temporality of education, reforms are characterised by *incremental* and *cumulative* effects across time. As a result, one would expect

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4 See UMC webpage: [www.minedu.gob.pe/umc/otros/resultadosEN2004.zip](http://www.minedu.gob.pe/umc/otros/resultadosEN2004.zip)

improvements in outcomes and equity over the period in question and also some evidence pointing in this direction for 1999. In particular, the strong historical leading role of the State in education in Uruguay and the policy emphasis placed on schools in the most disadvantaged contexts since 1996 should be associated with reduced inequality in primary education. If this is true, Uruguay represents an atypical case for the region, not only because (together with Mexico) it is one of few countries reporting *improvements* in student outcomes following the reform period, but also because Uruguay would have demonstrated the success that can be achieved by a policy that focuses on state delivery and rejects the sharing of responsibilities and funds with the private sector (in contrast to policies in Chile, Argentina and Colombia). But Kaufman & Nelson (2005) also note that to obtain such benefits, continuity is essential; that is, that *reversion* of policies is not what is being assessed. Based on other studies, my second hypothesis is that, despite superficial continuity between the two administrations responsible for the Uruguayan Reform Programme, the change of government during the programme resulted in a modification of its objectives and implementation, and that an understanding of this is essential to interpreting any changes. The reforms would thus have constituted a transitory programme evoking little strategic long-term consensus among the ruling elite of public education.

*c) First general hypothesis*

*Change in HLM*

The hypothesis that the structure of class and gender inequality was affected by reforms to the primary system can be analysed in three distinct, extended forms. The first form would be a maximal hypothesis (H1): the reforms would have generated a structural change in the entire educational system. In terms of a linear model, changes in the structure of determinants for the three years of data can be represented by means of equations [1], where  $\mathbf{M}$  is a matrix of  $\mathbf{N}$  (students) by  $\mathbf{P}$  (regressors), with columns having the two individual variables of interest (an index of global family capital and the student's gender); two school-level variables (school socioeconomic status and school sector) and three control variables as indicated above.

$$[1] \quad \begin{bmatrix} y_{1996} \\ y_{1999} \\ y_{2002} \end{bmatrix} = \begin{bmatrix} M_{1996} & 0 & 0 \\ 0 & M_{1999} & 0 \\ 0 & 0 & M_{2002} \end{bmatrix} \begin{bmatrix} \beta_{1996} \\ \beta_{1999} \\ \beta_{2002} \end{bmatrix} + \begin{bmatrix} \varepsilon_{1996} \\ \varepsilon_{1999} \\ \varepsilon_{2002} \end{bmatrix}$$

In this case, the data has two properties: it has a panel-data structure (Gujarati 2004) and the observations are not independent because students are nested within schools ("nested data") (Raudenbush & Bryk 2002). Structural changes may be observed both in time effects on student-level variables and on school-level

variables. Also, it may be that changes over time were not constant; it is likely they were greater in 2002 than in 1999, as Kaufman & Nelson (2005) suggested in their first general hypothesis. Taking account of these factors, the model allows the constant for each school to vary along with the gradient for socioeconomic class and gender effects on achievement. The model should test if each school has its own quality impact, and a specific social distribution of achievement (Lee, Smith & Croninger 1997). The equation [2] represents a random-coefficient regression model to which was added a time effect. In [2],  $X$  is a matrix with one column and two other variables: the level of household capital and student gender;  $W$  is a matrix with one column; the school's social status, the school sector and the interaction between the two.  $T$  is a time matrix that identifies whether the school was evaluated in 1999 or in 2002;  $C$  is the control variable matrix that is constant for the six years; and finally,  $Xu_j$  represents the three coefficients defined as random between schools: the constant, family capital and student gender. The general model [2] specifies 36 parameters: three of them are principal effects of inequality; two are principal effects of time (1999 and 2002); one identifies a principal effect of private sector and 26 are interactions among school-level variables and cross-level interactions.

$$[2] \quad y = XW_jT_j\gamma + C\delta + Xu_j + \varepsilon$$

The analysis was carried out as follows. If what has happened is adequately represented by equation [1], a model that confounded information without specifying principal effects and interactions of time would generate a loss of goodness of fit, imposing the same coefficients on the three samples. In standard OLS regression models, this analysis is carried out using Chow's structural stability test (Greene, 1999). For simplicity, I will test this hypothesis using STATA (not HLM), including robust standard errors and cluster subcommands (STATA 2003). If the null hypothesis of structural stability for 1996, 1999 and 2002 is rejected, the first, general hypothesis that the educational primary reform programme had an impact on achievement holds true.

#### *d) Hypothesis no 2*

##### *Improvement in the public sector*

As Gujatri (2004) points out, the rejection of the hypothesis would not allow us to determine which parameters had been modified. In this case, any of the following situations could hold true: i) there has been an improvement in outcomes (a change in the constant); ii) there has been a reduction in some or all of the inequality parameters; iii) there has been an improvement in outcomes as well as equity; or iv) invalid factors are influencing the result. For example, let us suppose that the identified model was [3]. Statistically speaking the differences generated in the conditional averages would be attributed to an improvement for 1999 and 2002.

$$E(y_{T=1999} / X) = E(y_{1996} / X) + \gamma_{ida99}$$

[3] *and*

$$E(y_{T=2002} / X) = E(y_{1996} / X) + \gamma_{ida02}$$

However, in [3] it cannot be ruled out that this improvement is due to other internal invalid factors, for instance, changes in the constitution of the student body over time (the “historical effect” mentioned earlier). The rejection of the “historical effect” requires a comparison group which has not been affected by the reforms, in this case the private school sector. In consequence, [3] is modified to observe the differences in the conditional averages among the students from public and private schools. Under hypothesis No 2, one would expect to see private sector students’ learning outcomes and their distribution according to class remain the same over the six years in question. This would be indicated by a change in the constants where the coefficient for the interaction between private and year would be negative. For example, for 1999:

$$[4] \quad E(y_{1999} / X) - E(y_{1996} / X) = E(y_{1996} / X) + \gamma_{02}ida99 - \gamma_{07}Priv99$$

*e) Restricted Hypothesis No 2*

Model [4] also imposes the restriction that all the interactions defined in model [2] among the private sector and the rest of the variables were zero, without testing this assumption. But this could confound any impact from the reforms with potential historical effects of social changes. On the one hand, it is possible that the social distribution of achievement in all schools (both public and private) has changed because of a more general change in equity across society<sup>5</sup>. On the other hand, the social distribution of achievement could have changed because the educational reforms were effective in their objective of reducing inequality in public schools.

This test was carried out by comparing the goodness-of-fit of the general model [2] with a restricted model representing the null hypothesis that the 15 terms capturing the interactions between the private sector and each student and school variable were zero. In the context of the HLM models, this is a multi parameter test for fixed effects, or H-test, which has a chi-square distribution, with degrees of freedom equal to the number of contrasts to be tested (Raudenbush & Bryk 2002).

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<sup>5</sup> This is a reasonable hypothesis. In 1997, the Gini coefficient for income distribution concentration was 0.434 but reached 0.453 in 2002 (Boado & Fernández, 2005).

*f) Hypothesis no. 3**Targeted impacts of the reform*

It is essential to consider a third hypothesis: that the educational reforms impacted only on the most disadvantaged schools and pupils, those deliberately targeted by the first general objective of the reform programs. Since 1996, the different policies implemented to improve school resources, curricula and teacher training, together with social policies aimed at improving students' nutrition and clothing quality, were aimed principally at the most disadvantaged schools. These schools represent between a quarter and a third of all schools in the country (Table 10.2).

To test this hypothesis, I will substitute matrix T which contains the time effects with a new matrix F in which columns add a variable identifying whether the school was classified as disadvantaged either in 1999 or in 2002. The next step is to compare the general model [2] with a restricted model and test which model best fits the data. The Deviance Test is appropriate here (Raudenbush & Bryk 2002; Snidjers & Bosker 1999). If the last model offers a better fit, then the evidence supports the notion of effective targeted educational reform.

## DATA

*a) Learning indicators*

This research utilises learning assessment data for Year 6 of Primary Education generated by the external evaluation unit of the ANEP<sup>6</sup>. Students' results in language and mathematics, computed as simple summative indexes, are the dependent variables in the multilevel analysis.

The first National Assessment was conducted in 1996 and included public and private schools, urban and rural. The latter were included if they had at least six children enrolled in Year 6. In 1999 and 2002 the second and third Assessments were conducted. A random sample of stratified groups was selected according to the school sociocultural context.

Comparable language and mathematics tests were used that aimed to measure the same areas, competencies and contents; they had the same number of items (24), a similar format, and similar grades of difficulty and discrimination indexes. The tests were designed with reference to an achievement profile of six competencies that students should reach by the end of primary education: narrative text comprehension, argument-based text comprehension, reflections on language, computational skills, problem solving and comprehension of mathematical concepts. In addition, surveys were carried out with students, families, teachers and principals. The design was modular, keeping a nucleus of indicators of social stratification, psychological profile, organisational configuration and pedagogical-didactic

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6 The use of microdata was authorised by the ANEP.



concepts. The assessments were carried out under the same protocol with strict controls. Response rates were high: over 98 per cent for students, 95 per cent for families and 80 per cent for principals and teachers (UMRE 1996 and 1999).

*Table 10.2: General Description of the Evaluations Used (unweighted HLM bases).*

	1996	1999	2002
<i>Total number of students evaluated</i>	46641	4988	5433
<i>Total number of schools</i>	1294	163	191
<i>Private schools</i>	244(18.9%)	22 (13.5%)	25 (13.1%)
<i>Disadvantaged public schools</i>	503 (38.9%)	40 (24.5%)	63 (32.3%)

Source: Own analysis based on UMRE data for 1996, 1999 and 2002.

The alignment of the tests in terms of design and structure offers two methodological strengths that are particularly relevant in evaluating the hypothesis that improved outcomes were due to the reform policies and not to other, invalid factors (Shadish, Cook & Campbell 2002). The administrative factor was minimised: the fact that the content included in the more recent tests was completely new to students minimised the possibility that they could have learnt answers by practising with a previous test. Second, the possibility that changes were attributable to differences in test structure (duration, graphic design, sequence etc) was minimised. This is an unavoidable possibility when one moves from a classical experimental approach to the more sophisticated one of IRT.

#### *b) Inequality indicators at the individual level*

Given the restrictive concept of educational inequality, any change between 1996 and 2002 should be evident in a variation in the magnitude of partial variation coefficients estimated for the social inequality indicators.

While recognising the broad-ranging theoretical discussion on the foundations of stratification, I adopt here an indirect, graduation-based approach, founded on the two types of capital proposed by Bourdieu (1986). Economic capital has generally been measured by means of a proxy indicator based on the amount of luxury items with which households are equipped. Studies in several countries of the region show that a luxury item index has moderately high correlations with household income and discriminates significantly between occupational categories. Given the six-year period that passed between the first and the third assessment, the effect of expansion or modification of consumer patterns was eliminated by adjusting the index for relative scarcity (Appendix II). Cultural capital was measured through its institutional and objective forms. The number of books reported in households and the possession of a computer were used as indicators of objective capital, while in relation to institutional capital I will continue with the regional tradition in social research of using mother's and father's years of schooling.

The use of a single summary measure of individual equity for a theory that proposes a two-dimensional theoretical space is questionable. However, the

indicators of economic and cultural capital did satisfy the factorial analysis test and therefore the construct validity of a one-dimensional indicator of global family capital can reasonably be asserted (Appendix II).

*c) Inequality indicators at the school level*

Four indicators were selected for the school level. First, each school will be identified by two indicators according to the year of assessment, “ida1999” or “ida2002”, with 1996 being the comparison year. These will allow testing of the first hypothesis regarding the generalised effects of the reforms. Second, a variable was created that takes the value 1 if a school is private and value 0 if it is public. The dual nature of schooling sector allows the first group to be used as a comparison to determine the effects of the reform. Third, a dichotomous variable was also developed to indicate whether or not a school was designated highly disadvantaged and therefore a priority target for the reforms (“MDF”). According to the focalised effects hypothesis this dichotomy defines the remaining schools as the second group of comparison.

Finally, there is an indicator of compositional effects (Blalock, 1984) that was used to control at the school level for a huge range of contextual variables related to learning. This indicator was operationalised for each school as the average level of capital of its students (“meancap”). This is often called a “school status” (Lee & Bryk 1989) or a “peer social effect” (Somers, McEwan & Willms 2004). It is a measure of the cultural and economic resources within the school environment that can be drawn on by the teaching staff (Fernandez 2004). Moreover, in Latin America this measure tends to correspond to the status of the area in which the school is located, especially if it is public, so that in effect we are measuring the relative location of a school in a segmented urban space. From a statistical point of view, it has been found that the impact of this measure is often greater than that of individual characteristics. For policy purposes, one might therefore look towards a diminution of socioeconomic segmentation for reversing the educational impact of local area.

*d.) Control variables at the individual level*

Together with social class and gender, research in the Latin American region shows that an explanatory model of school knowledge should include at least seven other predictors: i) the student’s socio-spatial domestic habitat; ii) the student’s status in the labour force; iii) whether at least one year of Initial (preschool) education has been completed; iv) whether a grade has been repeated v) age; vi) ethnic or linguistic identity; and vii) the student’s expectations regarding his or her future in the educational system (Fernandez, 2004).

In the micro-data utilised there was no information about age or expectations in 1996. The country’s official statistics did not register ethnic or linguistic identification until 2006. The grade repetition indicator available was excluded; it includes contradictory information due to changes in policy between 1998 and 2001, and there were consequently concerns about its validity.

In summary, control matrix **C** was composed of labour force status (“work”), number of years of pre-school education (“eduini”) and household density (“kedensi”). There was no examination of changes for these variables; they were given the same coefficients for the three years of interest.

## ANALYSIS

### *a) Improvements in outcomes over the six-year period*

*Table 10.3: Descriptive Statistics for Learning and Inequality Indicators*

	Maths			Language		
	Mean	S.D.	Coefficient of variation	Mean	S.D.	Coefficient of variation
<i>1996</i>	11.9	4.6	0.38	14.4	4.7	0.33
<i>1999</i>	12.6	4.7	0.37	14.7	4.3	0.29
<i>2002</i>	13.3	4.9	0.37	15.3	4.5	0.30
<i>Change 99/96</i>	0.7	0.1		0.3	-0.4	
<i>Change 02/99</i>	0.7	0.2		0.7	0.2	
<i>Change 02/96</i>	1.4	0.3		1.0	-0.2	
<i>Percentage change 02/96</i>	11.8	7.4%		6.3%	-4.4%	

Source: Own analysis based on UMRE data for 1996, 1999 and 2002.

Table 10.3 illustrates changes in outcomes based on non-adjusted averages for mathematics and language and the respective measures of dispersion, standard deviation and variation coefficient.

In comparing the rows for 1996 and 2002—the beginning and end of the analysis period—it can be seen that the non-adjusted average score in mathematics increased from 11.9 to 13.3, an improvement of one and a half points, equivalent to 11.8 per cent. In the language are, a there was an increase of one point, from 14.3 to 15.3, representing an improvement of 6.3 per cent. When considering the two sub-periods (1996-1999 and 1999-2002), the increase in score is similar in the case of mathematics, but in the case of language the improvement is stronger between 1999 and 2002.

The trend is erratic, as the second panel of the table shows. The observed improvement in mathematics in absolute terms is equal in both sub-periods. The improvement in language between 2002 and 1999 is twice the size of the improvement in the first period. In some ways this contrasts with the incrementalist hypothesis of Kaufman & Nelson (2005), according to whom a greater magnitude of effects would be expected earlier rather than later.

*b) General test of structural change*

Next I consider whether there was a real improvement in outcomes after controlling for the improvement in some indicators of family capital during the period. The equations test the null hypothesis that between 1996 and 2002 there were no changes in student outcomes or educational inequality. If, given the imposed restrictions, a significant loss of adjustment to the data observed through the value of F exists, then the null hypothesis of structural stability should be rejected, and we must accept that quality, inequality or both have changed during the six years in question (Greene 1999). Table 10.4 contains details of the two Chow stability tests conducted with the six adjusted models. The very high statistical significance of the calculated values of F allows rejection of the null hypothesis and acceptance of the hypothesis that there was a change in the structure of educational quality and equity in Uruguay between 1996 and 2002.

*Table 10.4: Chow's Test, Null Hypothesis: Structural Stability*

	Sum of least squares	Degrees of freedom	Sum of squares	Degrees of freedom	F	Significance
<i>Language</i>	794484.099	7	791399.247	47732	26.580	0.000
<i>Maths</i>	831218.837	7	824854.536	48268	53.203	0.000

Source: Own analysis based on UMRE data for 1996, 1999 and 2002.

*c) Multiparametric test of hypothesis 2*

The next step was to adjust the general model [2] and then compare it with the restricted model using a multiparametric H test (Raudenbush & Bryk 2002). Table 10.5 illustrates the results. In five of the six sets of tests conducted (using a probability level of 0.05), it is **not** possible to reject the hypothesis that all correlation coefficients between private sector and time are different from zero. In one test (gender and mathematics), there is at least one effect significantly different from zero. Given that the t-test for this coefficient, gamma 211, is highly significant, it is reasonable to retain it in subsequent models.

There are two ways of interpreting this finding. On the one hand, it could indicate that, except for the fixed constant, the structure of determinants could not be differentiated. Given that the treatment group and the first control group (students in the private sector) have the same levels of educational inequality it would not be possible to distinguish the historical effects referred to above. On the other hand, a different reading would maintain that if there had been changes in inequality, these held across the entire education system; a universal impact. In this case, one could argue against the value of a policy that maintained levels of educational inequality in a period during which social inequality for the whole country increased. But it must be asked, by what invisible and indirect mechanisms did the public reforms affect private schools to the same degree as public, despite these schools' vocal opposition to the reforms?

Table 10.5: Multiparameter H test for Private Sector Effects on Inequality

		H-test: $\chi^2$	Degrees of freedom	P- value
	Reading			
	<i>H-test for private sector effects on the achievement adjusted mean</i>	5.57	5	0.35
<i>Hypothesis 2</i>	<i>H-test for private sector effects on the household capital/achievement slope</i>	4.05	5	0.50
	<i>H-test for private sector effects on the gender/achievement slope</i>	10.24	5	0.07
	Maths			
	<i>H-test for private sector effects on the achievement adjusted mean</i>	7.02	5	0.22
<i>Hypothesis 2</i>	<i>H-test for private sector effects on the household capital/achievement slope</i>	4.80	5	0.50
	<i>H-test for private sector effects on the gender/achievement slope</i>	11.64	5	0.04

Source: Own analysis based on UMRE data for 1996, 1999 and 2002.

#### *d) Testing hypothesis no 3*

Finally the third hypothesis – that the reforms impacted only on disadvantaged schools – was tested. Table 10.6 shows that the main conclusion from the model for reading outcomes is that the general model which postulates a reform impact on *all* schools fits the data better than model predicting a targeted impact. The standard deviation is not significant. I conclude that, over the period in question, the educational reforms impacted equally for all schools and students. Although for the final model, I suppressed the H-tested terms that were not statistically different from zero, I also explored the possibility that at least one of the private-time effects was different from zero. As can be seen in Table 10.7, this was true for the adjusted between-school mean in 2002. This finding contradicts one of the preceding interpretations given: that the comparison and the more restricted treatment groups differ in terms of the inequality generated by the social status of the schools. It should be noted that this evidence would not be accepted from a statistically conservative point of view.

However, the standard deviation measure leads to a very different conclusion when testing the hypothesis for mathematics. In this case, the null hypothesis is rejected and the evidence supports the model proposing stronger impacts on disadvantaged schools. Nevertheless, it was observed that some of the adjusted terms were not individually statistically significant (that is, for the family capital/achievement slope), so they were dropped from the model. It also seemed

more appropriate to distinguish between assessment years (1999 or 2002) when analyzing the effects on the gender/achievement slope.

The following paragraphs report the main findings from the two final adjusted models (Table 10.6), with particular relevance for the comparison between universal and targeted effects hypothesis.

*e) Change in the structure of determinants for reading*

The final model for reading showed four principal temporal effects statistically significant at the 0.05 level, and one further effect for a significance level of 0.1. From this, only one term captures the targeted impact of educational reforms and it is for the year 2002 disadvantaged schools interaction. Although this supports the third hypothesis as discussed in the previous section, there is no solid evidence to reject the more general interpretation of universal effects on inequality. The data better fit a structure that does not differentiate on the grounds of school sector (public or private), independently of the implementation of any educational program.

Indicators of achievement behave differently in each year. In 1999 the adjusted mean achievement for all Uruguayan students improved by 0.294 points. However, in 2002 this general improvement is not observed, and instead improvement is found in disadvantaged schools: their students' scores increased by 0.959 points. This gain is less on average than would occur through a correct answer to *one* additional item in a schedule of 24 activities. The rest of the students would not have improved their reading knowledge for 2002, so all other things equal, their achievement was equal to 1996. The educational reform generated an incremental effect only in targeted schools, whilst the performance of non-disadvantaged schools reverted to the level of the base year.

Second, the model shows that the inequality associated with a school's social status index was both large and stable. The difference of 2.95 points in the status effect between the two cases represents an overall variation of 6.28 points between lower status schools (-0.89) and higher status schools (1.24), equivalent to more than 25 per cent of the test.

Third, time had an impact on the within-school distribution of knowledge according to student's social class. Inequality associated with household capital decreased by 0.580 points for 1999. However this effect was not maintained for the year 2002: again, rather than incremental benefits, we can observe a reversion of effects, to use Kaufman and Nelson's term (2005).

Table 10.6: Final Model of Language and Maths Determinants, 1996, 1999 and 2002

	Language	Maths
Constant	14.610(***) (t=201.981)	12.534(***) (t=161.850)
<i>School status ("meancap")</i>	2.946(***) (t=17.981)	3.136(***) (t=16.964)
<i>Private rather than public school ("privada")</i>	0.002 (t=1.094)	-0.004(*) (t=-1.858)
<i>School in 1999 ("Ida 99")</i>	0.294 (**) (t=1.952)	
<i>Public disadvantaged school in 1999 ("MDF 99")</i>		1.116(***) (t=2.796)
<i>Public disadvantaged school in 2002 ("MDF 02")</i>	0.959(***) (t=3.792)	1.384(***) (t=4.390)
<i>Global family capital ("capital")</i>	2.038(***) (t=40.258)	1.949(***) (t=33.536)
<i>Capital x school status</i>		0.350(**) (t=2.2447)
<i>Capital x year 1999</i>	-0.580(***) (t=-3.680)	
<i>Capital x school status x year 1999</i>	0.667(**) (t=1.923)	
<i>Capital x school status x year 2002</i>	-0.385(*) (t=-1.761)	
<i>Capital x private school</i>	-0.007(***) (t=6.691)	-0.005(***) (t=-3.723)
<i>Capital x year 2002</i>		0.313(**) (t=2.036)
<i>Female rather than male student ("sexo")</i>	0.847(***) (t=18.348)	0.043 (t=0.963)
<i>Gender x private school</i>	-0.003(**) (t=-2.410)	-0.005(**) (t=-1.968)
<i>Gender x school x year 1999</i>		0.723(**) (t=2.204)
<i>Gender x disadvantaged public school x year 2002</i>		-0.400(**) (t=-1.705)

Cont: Table 10.6

	Language	Maths
Constant	14.610(***) (t=201.981)	12.534(***) (t=161.850)
<i>Dwelling density ("kedensi")</i>	-0.185(***) (t=-9.310)	-0.138(***) (t=-7.243)
<i>Student also working ("trabajo1")</i>	-0.763(***) (t=-9.310)	-0.576(***) (t=-7.173)
<i>Years of preschool education ("eduini1")</i>	-0.265(***) (t=-5.830)	-0.198(***) (t=-4.782)
Variable effects		
<i>Variation at the school level</i>	3.292(***)	3.686(***)
<i>Variation in the effect of family capital</i>	N/A	0.431(***)
<i>Variation in the effect of gender</i>	0.620(***)	0.427(***)
<i>Variation from level 1</i>	13.902(***)	13.537(***)

Source: Own analysis based on UMRE data for 1996, 1999 and 2002

This was not the only identified effect of social class. To understand the more complex interactions with time, I now turn to the simulations reported in Table 10.8. The final model includes two interactions, one for 1999 and other for 2002. In 1999, the gain in reading for the most advantaged students — those with high or moderately high family capital — was increased when they attended a high-status school. Their achievement improved on average by 3.202 points. In contrast, the achievement of a student with low levels of family capital, who in addition was attending a lower status school, decreased on average by 3.240 points. If the means are compared, the difference reaches 6.443 points or 25 per cent of the test score. In 2002, no general improvement in the adjusted mean was observed, but instead inequalities associated with school status and social class were reduced. Compared with 1996, a student in 2002 in the most favourable situation improved their achievement by 0.640 points. In the most disadvantaged situations, student achievement dropped by 2.540 points. The difference between the two (5.180 points) represents 21.6 per cent of the test, which is smaller than the difference found in 1999.



Table 10.7: Model of Differential Effects in Language according to Social Class for 1999 and 2002. (The columns include the maximum and minimum odds values observed.)

	Coefficient	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
		Simulated values					
<i>Family capital</i>	2.038	1.492	-1.100	1.521	-1.403	1.521	-1.403
<i>1999</i>	-0.580	1.000	1.000	0.000	0.000	0.000	0.000
<i>School status x 1999</i>	0.667	1.113	-0.629	0.000	0.000	0.000	0.000
<i>School status x 2002</i>	-0.385	0.000	0.000	1.193	-0.827	1.193	-0.827
<i>Capital x private school</i>	-0.007	0.000	0.000	0.000	0.000	1.000	1.000
<i>Effect on learning Score differences between the extremes</i>		3.202	-3.241	2.640	-2.540	2.633	-2.547
<i>Percentage difference divided by the number of items (24)</i>			6.443		5.180		5.180
			0.268		0.216		0.216

Source: Own analysis based on UMRE data for 1996, 1999 and 2002.

Neither general nor targeted impacts of gender over time were found in the study. The gender gap in test scores favours female students: they score on average nearly an additional point higher (0.846) in comparison with their male counterparts. Regarding type of school attended, private schools demonstrated the same level of achievement as the public sector. Nevertheless, there are significant interactions between school sector and class and gender inequalities. Table 10.7 reports several simulations based on the most favourable and the most unfavourable social situations observed, but also including attendance at a private school rather than a public one.

The model indicates that, in general, class inequality in the private sector is weaker than in the public sector. Students in private schools derive a weaker benefit from their family cultural capital than their peers in the public sector. The difference in the level of the social class effect between sectors is quite small, though statistically significant, and is associated with a fall in predicted impact amongst both higher class and lower class students. On the other hand, the impact of *gender* is increased by attendance at a private school. Holding social class constant, a girl

enrolled in a private school receives a reading score which is about 3 per cent higher than in the public sector.

*f) Change in the structure of determinants for mathematics*

The final model, adjusted for the mathematics test shows four significant temporal effects at the 0.05 level of significance, and an additional one, if a 0.01 level of significance is accepted. There are several differences as compared to the results obtained for language that should be highlighted.

First, the estimated effects show cumulative impacts of time on achievement, but restricted to disadvantaged schools. Scores increased by 1.116 points in 1999 and 1.384 points in 2002. This finding indicates that the policy was successful in targeting the most disadvantaged students. Second, it should be noted that private school attendance generates a small, but statistically significant achievement gap equivalent to 0.004 points. This effect is constant across the period under analysis.

Third, the adjusted means of mathematics achievement show that school social status has a major impact on achievement, equivalent to 3.136 points. If we compare two equivalent students, one attending a very low status school and the other a school with high social status, there will be a difference in mathematics achievement scores of 7.742 points. The study also identified a fixed time effect on the family capital/achievement slope constant: for each additional point in the social status index, inequality increased by 0.350 points.

Fourth, the adjusted model casts some interesting light on gender inequalities in Uruguayan education. On the one hand, it indicates that female students attain different results in relation to their male classmates, depending on whether they attend public or private schools (something already observed in the language area). On the other hand, the adjusted model shows that during the six-year period in question, gender differences in mathematics achievement appeared that had not been evident in either 1996 or 1999. For these first two assessment years, there were no statistically significant differences between males and females in *public* schools. However, if we accept a greater estimation error ( $\alpha=0.088$ ), in 2002 there was a very specific gender difference: the scores for females attending very disadvantaged public schools fell significantly. What might be the explanations for these two phenomena?

A school status effect was also observed in relation to gender inequality. The second panel of Table 10.8 shows simulations where situations 1 and 2 indicate female students in 1999. Female students in 1999 attending schools with the highest social status had an increase of nearly one point (0.805) in their score, while female students attending the lowest status schools scored 0.454 points less. Thus, gender effects are modified by school social status which generates different effects: positive for high-status schools and negative for lower-status ones.

Table 10.8: Model of Differential Effects in Maths according to Social Class for 1999 and 2002. (The columns include the maximum and minimum odds values observed.)

	Coefficient	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Class inequality: simulated values							
<i>Capital</i>	2.038	1.492	-1.100	1.521	-1.403	1.521	-1.403
<i>Social status</i>	0.350	1.113	-0.629	1.193	-0.827	1.193	-0.827
<i>2002</i>	0.313	0.000	0.000	1.000	1.000	1.000	1.000
<i>Private school</i>	-0.005	0.000	0.000	0.000	0.000	1.000	1.000
<i>Effect on learning</i>		3.430	-2.461	3.829	-2.835	3.824	-2.841
<i>Difference</i>			5.891		6.665		6.665
<i>Percentage difference</i> <i>divided by the number</i> <i>of items (24)</i>			0.245		0.278		0.278
Gender inequality: simulated values							
<i>Female student</i>	0.000	1.000	1.000	1.000	1.000	1.000	1.000
<i>Private school</i>	-0.002	0.000	0.000	0.000	0.000	1.000	1.000
<i>School status 1999</i>	0.723	1.113	-0.629	0.000	0.000	0.000	0.000
<i>Disadvantaged public</i> <i>school 2002</i>	-0.400	0.000	0.000	1.000	1.000	0.000	0.000
<i>Effect on learning</i>		0.805	-0.454	-0.400	-0.400	-0.002	-0.002
<i>Difference</i>			1.259		0.000		0.000
<i>Percentage difference</i> <i>divided by the number</i> <i>of items (24)</i>			0.052		0.000		0.000

Source: Own analysis based on UMRE data for 1996, 1999 and 2002.

## CONCLUSIONS

In the successive tests with different explanatory models it has become clear that between 1996 and 2002 there was an improvement in learning outcomes in Uruguayan primary schools. This is apparent in the observed differences between the averages in reading and mathematics, adjusted for students' social and gender characteristics. This improvement was not across all schools, nor was it restricted to public schools. The adjusted final HML model showed that the beneficiaries of the six years of reforms were those students who attended schools identified by the educational administration as highly disadvantaged.

However, the analysis also showed that the hypothesis of cumulative and incremental effects across the period must be ruled out. Towards 1999 there was an improvement in outcomes, but this had reverted by 2002. Rather, the evidence supports a more pessimistic hypothesis: that the changes in educational

administration due to the change of government around the year 2000 altered both policy objectives and implementation. In spite of the rhetoric proclaiming continuity, the reform policies were in fact transitory.

The second research question focused on the impact of the reforms on class and gender inequalities in learning outcomes. As has been reported, the identified temporal effects were erratic and contradictory. The major effect of social class upon performance in language tests decreased in 1999, but returned to its previous level in 2002; the effect increased in 2002 for mathematics. In contrast, the indirect and multiplicative effects of family capital and social status were only significant for language. While there was a decrease for 2002, an increase of almost half a point was evident in 1999. From this second point of view, due to multi-level modelling (HLM), it is clear that during the period in question, policy changes were not sufficient to combat inequities, particularly those associated with urban socio-spatial segmentation as measured through school social status. The general conclusion of this research exercise is that educational inequalities have persisted in spite of the reform programme.

In addition, the study found that attributing improvements to the Reform Programme is problematic. This requires causality to be inferred from correlations made on the basis of three independent and successive cross-sectional samples. The main methodological issue was to eliminate the possibility that observed changes were due to a “social history effect”, given that during the period in question, income inequality increased and possibly the most profound economic crisis in Uruguayan history began (Boado and Fernandez 2003). For this reason, the study proposed two comparison groups formed by post-administration statistical equalisation. The first comparison group consisted of private schools that, as a whole, not only did not participate in the reforms, but were actually opposed to them. In this case, the entire public sector constituted the “treatment group”. The second design identified the most disadvantaged public schools as a “restricted treatment group” and all other schools, private and public, as a control group. This comparison was successful for the second hypothesis, as has been noted earlier. But other factors may have intervened, casting doubt on the conclusions. Some of these factors, for example survey construction effects, may have been adequately controlled for by the care taken with test design and implementation during the three years. However, the problem persists that the reform effect cannot be separated from the “administration of the test” effect. For example, it is possible that the improvement observed is due to an improved ability to answer the closed multiple-choice questions typical of these types of tests.

Before inferring causality it should be remembered that the validity of an attribution only holds if the model is correctly specified, so that all other factors that might influence outcomes and equity during that period have been controlled. Given these limitations, it is nevertheless reasonable to conclude that the reform programme had a positive impact on outcomes for students in the most disadvantaged schools, consistent with the focus of policy objectives. But from a policy point of view, it is also important to consider the *magnitude* of the improvement. If the adjusted averages are taken as a reference, after six years of reforms there was an increase of 0.95 points in language scores and 1.38 points in

mathematics scores in a 24-point test. Given the strong involvement of the State, and the financial and other costs involved, doubts arise as to the programme's efficacy. Is this a reasonable return on such substantial investments?

Another general question remains as to how to interpret the persistence of inequality. Should the reforms be held responsible? On the one hand, none of the implemented programmes targeted mathematical improvement and, in this area, an increase of social class inequality was observed for 2002. However, there were specific policies and programs targeting language teaching (Table 10.1), and in this area, if only temporarily, inequality decreased. This indicates that one can be hopeful about the potential for State interventions to reduce inequality.

Nevertheless, an increase in the effects of school status upon social class and gender inequalities was also observed. If this measure is a proxy of the segmentation of urban space, as it is hypothesised here, then another question arises: what macro-political conditions are needed to develop an educational policy that effectively guarantees equality of opportunities? It is clear that, in general, educational policy since the 1990s has faced an array of particularly difficult restrictions and conditions imposed by neo-liberal macro-economic policies. It is paradoxical that the region's most state-centred educational reform was adopted by governments that promoted agricultural exports, deregulated the labour market, and supported neither investment in workers nor in research and development (PNUD 2002; Boado and Fernandez 2005). In such a context, then, the reforms achieved more than might be expected given that, in other ways, the country was heading in exactly the opposite direction.

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Appendix I:

Social stratification indicators and control variables

Table 10.9: Comparison of Possession of Luxury Items between 1996 and 2002. (\*) indicates items that were used in the scale of equipment.

Item	1996	1999	2002
Electric light (*)	97.3%	92.9%	99.3%
Water heater (*)	72.8%	76.3%	81.4%
Refrigerator without freezer	66.9%	60.5%	53.7%
Refrigerator with freezer	26.4%	33.9%	46.9%
Refrigerator (*)	89.0%	88.3%	94.2%
Washing machine (*)	48.2%	58.9%	70.0%
Telephone (*)	46.9%	63.9%	67.5%
Colour television (*)	88.0%	89.5%	95.5%
Video recorder (*)	44.4%	42.5%	42.4%
Video game	50.7%	46.3%	N/D
Car for household use (*)	33.2%	35.4%	36.3%
Microwave oven	N/D	24.6%	40.5%
Dishwasher	N/D	4.5%	5.8%
Clothes dryer	N/D	9.6%	13.6%
Mobile phone	N/D	21.5%	33.6%
DVD	N/D	N/D	2.8%
Cable television	N/D	N/D	40.6%
Satellite television	N/D	N/D	3.9%

Source: Own analysis based on UMRE data for 1996, 1999 and 2002.

The index of household equipment was constructed, weighting the possession of each household ‘luxury’ item by the observed relative proportion of that item ( $p_j$ ) in the relevant reference year.

$$Equipa8p = \sum_{j=1}^8 b_j (1 - p_j)$$



The indicators which were available to capture quality of housing differ over the three reference years. As a result, the only attribute retained in the analysis was density of living space used for sleeping (KEDENSI).

To measure institutionalised cultural capital, two variables were constructed (mother, father), transforming the information from the survey questionnaire into years of schooling.

Information on student gender comes from two sources, both based on student responses: the mathematics test and the language test. This enabled missing cases to be kept to a minimum (less than 1 per cent).

Grade-repeating did not constitute a clear indicator for 1999 and 2002 for reasons explained in the text, and because there were variations in how the policy of 'automatic promotion' was implemented. Moreover there was definite evidence of the existence of both tacit promotions quotas and 'repetition quotas'.

Labour force activity of the child was constructed as a dichotomous variable, where 1 represents engaged in work, and 0, not active in the workforce. The source was information provided by the student in one of the context questionnaires.

Attendance in pre-school was derived from information supplied by the family and represented as number of years experienced by each child, with the restriction that the experience had to be in formal educational settings.

## *Appendix II:*

### *Global family capital*

*Table 10.10: Comparative Distribution of Economic and Cultural goods (averages)*

	1996	1999	2002
Cultural capital			
<i>Mother's education (years)</i>	8.68	8.76	8.96
<i>Father's education (years)</i>	8.42	8.43	8.49
<i>Ownership of a computer</i>	0.11	0.18	0.28
<i>Number of books</i>	35.38	36.30	35.55
Economic capital			
<i>Weighted equipment index</i>	1.39	1.39	1.54
<i>Dwelling density</i>	1.61	1.57	1.56
<i>Overcrowding</i>	0.17	0.16	0.16

Source: Own analysis based on UMRE data for 1996, 1999 and 2002.

Table 10.11: Factorial Structure compared for 1996, 1999 and 2002: Factorial Weights, Communalities, Eigen Values and KMO. Dwelling density not included.

	Pooled	1996	1999	2002	Pooled	1996	1999	2000
	Cultural capital							
<i>Mother's education</i>	0.796	0.798	0.778	0.788	0.634	0.637	0.605	0.621
<i>Father's education</i>	0.772	0.773	0.765	0.767	0.596	0.598	0.585	0.588
<i>Ownership of a computer</i>	0.657	0.643	0.732	0.770	0.432	0.413	0.536	0.593
<i>Number of books</i>	0.754	0.768	0.646	0.718	0.569	0.590	0.417	0.516
	Economic capital							
<i>Weighted equipment index</i>	0.770	0.776	0.724	0.753	0.593	0.602	0.524	0.567
<i>Eigen value</i>	2.823	2.840	2.668	2.885				
<i>% variance explained</i>	0.470	0.473	0.445	0.481				
<i>KMO test</i>	0.846	0.846	0.824	0.849				
<i>Reliability</i>	0.738	0.740	0.727	0.743				

# Education Feminism, Gender Equality and School Reform in Late Twentieth Century England

*Madeleine Arnot*

## INTRODUCTION

The aim of this chapter is to discover what we have learnt about gender inequalities in society from the ways in which such inequalities have been addressed by policy makers, teachers and one of the major social movements of the twentieth century, education feminism (Stone 1994). Historical analysis of the gender reform movement exposes the complex interface between economic and political structures, macro and micro educational structures and processes and cultural movements, and the nuanced engagements between social class, ethnicity and gender inequalities. We learn how gender inequalities operate differently in different contexts and spaces and therefore remove the possibility of generalisations and simplistic policy approaches. We see how the search for measures of gender equality in education reflects differences of perspective, purposes and assessments. Some commentators argue that we have witnessed a ‘gender revolution’; some even go so far as representing women as ‘post-modernity winners’. Few would disagree that there have been some discursive and material shifts in gender relations. The challenge here is to capture the continuity and the changes, the swings and roundabouts in the ways in which patriarchal, social class and racially hierarchised societies respond and adapt to the demands of female citizenry (Arnot and Dillabough 2000). This chapter can only briefly capture these moments of political transformation and the frustrations at the immobility of such power relations.

The particularities of the English education system in the second half of the twentieth century provide a valuable context in which we can see the conditions for equality reform through a state which was initially largely decentralised and, later, strongly centralised. This shifting structure shaped the rise of the education feminist reform movement in England and Wales in the 1970s and 80s whose main target was to change girls’ education. Part of the women’s movement of the time, education feminism was developed by primary and secondary school teachers and by academics. They were engaged in what could be called ‘counter-hegemonic’ work developing an alternative version of femininity to the version embedded in the patriarchal authoritarianism and Victorian moral and family values of the nineteenth century (Arnot et al. 1999).

The so-called ‘modernising’ of gender relations arguably is one of the major leitmotifs of twentieth century England. Some of the effects of this transformation

can be seen in the ‘closing of the gender gaps’ in curriculum choice and academic performance. Yet the greater female educational achievement, the greater the gap between women’s qualifications and their employment; the higher the level of female achievement, the more we witness a moral panic over male achievement levels. Further, the stronger the success of professional middle-class women, the greater the social class gap becomes.

The progress of education feminism and the story of its adaptability to shifting political discourses and educational structures can be told through the analysis of three very different periods. The first inception phase of feminist activism was the era associated with social democratic consensus around notions of equality of opportunity; the second phase encouraged New Right forms of managerialism and marketisation of education; the third phase involved New Labour in two contradictory gender agendas that marginalised feminist praxis<sup>1</sup>. Each phase is explored in turn.

#### FEMINIST VOLUNTARISM AND THE SOCIAL DEMOCRATIC ERA (1960s AND 70s)

The first phase of activity around gender inequalities was closely associated with the consumer boom of the 1960s and the ensuing civil rights movements. The undemocratic English educational system, in which the principle of social class differentiation had been used to shape a new tripartite system of secondary schools (grammar, technical, secondary modern), was focused predominantly on the need to provide boys with appropriate vocations. Post-war expansion of education had relatively little impact on working-class girls whose educational outcomes remained similar to, in gender-segregated form, those of working-class boys. The pattern in the post-war period established that middle-class boys were twenty-one times more likely to go to university than working-class girls (c.f. Arnot 2000). With few pretences of neutrality, these patterns of educational provision based on privilege as well as sex, made alliances possible between a range of activists concerned about social justice in education more widely (e.g. socialist, feminist, anti-racist).

The particular structure of the English and Welsh educational system (at the time centrally administered but locally controlled), and the commitment to a social democratic consensus around the value of equality of opportunity, deeply affected the ways in which the gender reform movement developed in the UK. In this case, the partnership between schools, local and central government meant that the strategy of reform also relied heavily upon gaining consent rather than using coercion. This strategy (described as the ‘tea party principle’) drew upon rational/legal arguments for gender interventions. Change would occur through awareness raising and professional teacher development programmes. The strategy was to raise awareness of sex discrimination (a new concept) whilst gaining public action on behalf of women and minority ethnic groups.

By the end of the 1960s, there was statistical evidence of the high levels of sex discrimination in employment, social policy and education. The contradictions of

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<sup>1</sup> See Arnot, 2000 and 2006 for a detailed analysis of the gendercurriculum reform movement.

women's raised expectations and the exposed realities of sex discrimination in employment and sexual oppression in the family forced the Labour Government to act. However, the Equal Pay Act in 1970 and the Sex Discrimination Act in 1975, only partially addressed those concerns. Two regulatory bodies, the Equal Opportunities Commission (EOC) and the Commission for Racial Equality (CRE), were designed by the legislation to be proactive regarding consultation on national policy issues, conducting formal investigations into possible discrimination, responding to complaints under the law, and promoting greater opportunities through educational activities. Both pieces of legislation represented major shifts in the understanding and interpretation of equal opportunities away from social class towards gender, race and ethnicity.

In the event, anti-discrimination legislation was employed only partially successfully in relation to gender and race inequalities in education. The effect, however, was to create a climate of social change in which gender inequalities in education could be tackled. The models of school reform were essentially liberal in focus drawing attention not to structural inequalities but rather to the attitudinal obstacles to access and performance and particularly to the role of conventional sex role stereotyping. This was the first time in English history that the concept of 'sex discrimination' was used. The legislation, however, had left single-sex school provision intact providing it was fair in terms of number of places available, and textbook content was excluded from the provisions of the legislation. The Equal Opportunities Commission (EOC) encouraged schools and local authorities to review their curricular provision, content and careers advice and to develop strategies which aimed at fulfilling boys' and girls' full potential.

### *The growth of 'education feminism'*

Central government initiatives such as these distanced themselves from the swell of political thinking associated with the women's movement and the increasingly articulate and more radical professional voice of teachers. Education feminism as a political reform movement was grounded in the politics of the teaching profession. It was partly an expression of female teachers' own frustration with their education and with their employment. In England and Wales, few women were able to rise to the top of the profession (where men dominated and still continue to dominate headships, the inspectorate, university education departments and administrative/policy-making positions) and women received scant support from the male-led teacher union movement which appeared to be largely uninterested in the problems women faced as employees.

Backed by the municipal socialism of a number of inner city Labour-controlled local authorities, feminist teacher initiatives received official recognition and small-scale funding (e.g. through in-service budgets, the provision of specialist advisors, and the seeding of action research projects). Although in some notable instances pressure was put on head teachers to deliver action plans on gender equality (and even compulsory attendance at in-service courses), for the most part, teacher-led change relied upon voluntary efforts. In-service courses were designed around the concept of teacher-researcher with the aim of involving as wide a range of teachers

as possible from the various sectors of education. These involved a rejection of top-down management approach to change, preferring instead:

A bottom-up model [which] is harder to support and likely to produce divergence between institutions, but is the model philosophically most acceptable to the nature of the initiative. as it forces acknowledgement of the fact that much of the innovative work, both in defining the problems in providing an education for gender equality, and developing practice to bring it about, has been and is actually being done by teachers within their schools. (Taylor 1985:126)

Contact and communication networks (prevalent in the women's movement) during the 1970s and early 1980s thus played a key role in spreading ideas across diverse social communities, schools and phases of education. In a number of local authorities, equal opportunities advisors (and sometimes, local inspectors) were used to promote gender networks through courses, projects and materials; in schools, special responsibility posts for equal opportunities and the development of school policies reflected LEA policy at the school level. The Women's National Commission's (1984) survey of LEAs found that the majority had briefed schools on the Sex Discrimination Act, and a large minority (about a third) had set up working parties, or encouraged schools to 'take countering action'. Interestingly, only 12 per cent had used or created special responsibility posts for gender.

Critical to the development of school projects was the sharing of information and strategies. In the UK context of a devolved curriculum, the existence of teachers' professional organisations and networks was vital for generating and sustaining innovation. In the UK in the 1980s teacher unions also played a key, if belated, role in supporting teachers' interests in gender equality. In 1978 a group of women in the National Union of Teachers (NUT) grouped together to respond to what they saw as the low priority given to women's rights issues in the union, the ghettoisation of women in the lowest paid and poorest funded areas of education and the general domination of the union and its policy-making by men (Women in the NUT 1980). Such union activism highlighted male-dominated union hierarchies and the low status of women's issues on the union agenda.

Women teachers mobilised as 'insider reformers' alongside academic feminists. Not surprisingly, the academic debates within the women's movement deeply affected the thinking of teachers and shaped their interpretations on how schools could be made friendlier to girls. 'Girl friendly' schooling however was not uncontested. As a concept, it represented the tensions between, on the one hand, 'liberal educational feminism' which worked with a politics of access and concerns about curriculum reform and student performance (outcomes), and on the other, 'critical educational feminisms' which attempted to ally feminism to other more radical egalitarian movements which challenged patriarchal, class and racial systems of control.

Liberal educational feminists focused on achieving for the category 'girl' equality of access and equality of treatment. They believed that only through the provision of equal educational experiences for both sexes could a genuinely equal society be developed. Their main aim was to achieve open curricular access and equal experience and participation for boys and girls. Female failure (or

underachievement) at school, in higher education and in the workplace in comparison was seen to be the result of conventional sex role socialisation. The measures they proposed to assess inequality were, for example:

- different attainment patterns in certain subject areas (especially maths, science and technology);
- sex stereotyping in optional subject areas and in careers advice, bias in examination and test construction and marking;
- sex differences in role models (especially school staffing patterns);
- a lack of self-esteem and confidence amongst girls which reduced their expectations and narrowed their horizons; and
- a lack of gender awareness (gender blindness) amongst parents, teachers and society generally about the failure to develop women's potential.

Such concerns dovetailed well with the individualism underlying social democratic approaches and with economic concerns about the lack of skilled 'manpower' especially in the scientific and technological professions.

The co-educational school in the state system was the particular focus of gender reform in the 1970s and 1980s. By the 1970s, most comprehensive schools were co-educational (often with male head teachers), even though there had been no policy debate on the consequences of mixed as opposed to single-sex schools. The concern expressed by mainly women teachers about the possible negative effects on girls' education of mixed-sex schooling in the 1920s and thereafter, had been ignored. For the majority of girls and boys, large co-educational secondary schools with an undifferentiated comprehensive pupil intake became the most common form of schooling. However, new evidence revealed that such schools channelled boys and girls into different subject areas and that girls speedily lost any educational advantage gained at primary school. Debates about the respective merits of single-sex and mixed-sex secondary schooling were taken up by feminists in the UK in the 1980s. These debates ran headlong into discussions about the elite social class basis of single sex education.

The political stance of liberal feminist educationalists was both pragmatic and radical. It was most effective when exploiting and working with mainstream educational concerns and challenging formal, legalistic inequalities. Connell (1990) described liberalism as 'a radical politics of access'. It placed great emphasis on doable reforms in mounting a substantial number of small-scale initiatives in individual classrooms and schools aimed at persuading girls to opt for previously male-dominated subjects such as science, maths, technology and boys' crafts. It challenged sex-stereotypical assumptions in textbooks, curriculum and pedagogies. Because of the devolved nature of the English educational system at the time, 'teacher researcher' and 'action research' projects were feasible and attractive.

Girls' lack of confidence in certain subjects ('learned-helplessness') offered an amenable target of reform particularly in maths and science. In mathematics, for example, despite girls' relatively good performance in the early years, girls' success was often attributed to the mediocre characteristics of diligence and obedience. At secondary school levels, boys were frequently entered for examinations despite poor results in their preliminary assessments or 'mocks', and girls, excluded, despite good performance. The gendered definition of mathematical achievement was found to

privilege male success as 'gifted' and 'elegant', in contrast to female achievement defined as 'routine' and 'rule following' (Walkerdine and Walden, 1998).

More radical feminist perspectives (included here are radical, Marxist, socialist, lesbian, black feminisms, etc.) suggested that these approaches were too superficial and distracting. They offered instead more trenchant ideas about the role of education, for example, in asserting the ethnocentric, male-centred nature of school knowledge and the white male domination of educational organisations and management within capitalist societies. Radical feminists considered whether there might be a role for single-sex schooling in the creation of an autonomous female learning culture, drawing attention to contentious gender issues in schooling such as the extent of sex harassment and violence in schools, normative heterosexuality in sex education, and the negative experiences of gay and lesbian students. Teachers were asked to think critically about how 'male' identified organisational characteristics of hierarchy, competition and managerialism affected women in the professions who identified more with practices of valuing personal experience, co-operation and democracy.

The goal of reducing the impact of sexism on girls involved extensive work with teachers in raising their awareness of the effects, for example, of detrimental sexist language, and male teachers' bonding mainly with boys through humour and shared male references (such as to football). It also included addressing the dominance of boys in terms of classroom discussions, control over playground space and sporting fixtures in schools, the reward system, etc. Although it was never clear whether there was a connection between participation in school life and girls' educational success, this powerful political critique encouraged school policies on gender language, sexual harassment, mixed-sex sport, and anti-sexist education. The aim throughout was to challenge naturalistic assumptions about sexual and gender difference and about the dependence of girls upon men and the subordinate role assigned to them as homemakers and carers.

The relationship between the family, schooling and the economy was investigated by socialist and black feminists. They saw education and schooling as an arena in which wider patterns of social power and subordination are reproduced and sustained. Whilst liberal and radical feminism appeared to leave intact powerful social inequities of social class, race and ethnicity, socialist and black feminism arguably offered an agenda too critical for state schooling to take on board. Socialist feminism highlighted the processes of cultural and social reproduction of gender and social class relations, such as working class girls' domestically oriented education and their subordination through domestic and low status badly paid work and through the cult of femininity and romance (c.f. Arnot 2000). Black feminism, on the other hand, explored the construction of the 'black girl', her positioning within colonial models of education, the construction of 'other', and the failure of education to engage with difference in ways other than through racism, marginalisation and exclusion (c.f. Mirza 1992). As Dillabough (2001) notes, in these critical traditions, the notion of a gender binary of male and female were replaced by an understanding that there were multiple femininities and masculinities, that identities were the result of collective experiences and



interactions – fluid social constructions which were more produced than reproduced in the educational process.

By the 1980s, the development of poststructuralist and postmodern social theory rocked feminist education scholarship. Taken to its logical conclusion, feminist theory itself could be understood as a discourse about, rather than a set of explanations for, social life. Even more disconcerting was the view that education feminism itself represented a discursive tool which masked other inequalities and left them intact. In response, education feminism took a poststructuralist turn, focusing far more critically on the categorisations of gender, gender dualism, gender identity work, culture, language and subjectivities. Such analyses, although detailed, sophisticated and illuminating, played little part in the reconstruction of schooling in the 1990s. Such feminism research largely lost its audience in the teaching profession. This was partly as a result of the reduction of teachers' classroom autonomy and partly as a result of its distancing from the more do-able school reforms.

In retrospect, the pattern of reform of gender inequalities in this first phase was patchy. Teacher initiatives tended to be small-scale, highly localised and short-lived with consequent problems of under-financing and resourcing. They generally involved teachers at the lower end of the school hierarchy and were more focused on the secondary rather than the primary sector because gender differences in subject choice and examination results provided more tangible evidence of gender inequality. Evidence of the continuing pattern of stereotypical subject choices of girls and boys pointed to the resilience of traditional local school cultures and the need to use stronger strategies to reduce the effects of gender differentiation. By the 1990s, the more critical feminisms were at odds about what was required by way of gender equality interventions in schools. On the one hand, more radical interventions were needed; on the other hand, the concept of equality was now even more contentious. In the event, the neo-liberal policies of Mrs Thatcher's government took over and fundamentally reshaped educational provision, sweeping aside the girl-friendly agenda whilst marginalising or discarding the more radical traditions of English teacher praxis and egalitarianism.

#### EDUCATION FEMINISM, MANAGERIALISM AND NEW RIGHT GOVERNMENT AGENDAS (1980s TO 1997)

It is one of the great paradoxes of late twentieth century that many of the gender projects in schools described above were developed during the first phase of a Conservative government elected to power in 1979. This was a government that announced that the 'age of egalitarianism' is over. Yet, in the UK, the first half of the 1980s was the key period of educational feminist activity — an extraordinary historical coincidence when both the government and feminism were both encouraging greater autonomy and independence (Arnot et al. 1999). From the point of view of gender inequality, the contradictions contained within the educational agenda of the Conservative administrations between 1979 and 1997 were highly significant. New policy approaches were identified which were to change the shape

of gender patterns in education, closing some gender gaps in curricular choice and performance, whilst opening up others.

In our book 'Closing the Gender Gap', Miriam David, Gaby Weiner and I describe the deep dissatisfaction of the new Right in the early 1980s with prevailing standards of education. As Prime Minister heading up a unique coalition of parliamentarians with neo-liberal, neo-conservative and new vocationalist ideologies, Mrs Thatcher personally oversaw a complete overhaul of the English and Welsh educational system. The raising of standards and the modernising of the UK entrepreneurial culture constituted a new political agenda, in which both boys and girls were encouraged to aspire to the world of work (rather than family or community), and abandon their outmoded identities and aspirations. They were to engage with the technologically oriented global culture and the new individualistic spirit of the age. In this context, schools would exist to produce a modern workforce that was not classed, sexed or racially classified. Thus the future educated worker would be mobile, flexible and qualified, well able to seize the opportunities made available to him or her. Yet paradoxically, Thatcherism also involved reinstating a version of traditional family values. Schools would educate a future generation in morality: respectful of authority, discipline and tradition. Education for parenthood, sex and moral education were all cornerstones of this programme to 'remoralise' the nation.

New Right reforms of the economy and of education created spiralling differences between young men and women's experiences (Arnot 2000). The collapse of the manufacturing industry, the instability of many middle-class occupations (particularly for skilled and technical workers) and the reform of schooling had differentiated gender consequences. As Britain moved from industrialisation to post-industrialisation, class relations in work and education changed. Complex economic, industrial and regional shifts in employment opportunities, particularly the growth of both public and private service sectors, impacted upon women's position. Traditionally the preserve of women workers, opportunities for service-sector work expanded even if on a casual, temporary, part-time and/or low-paid basis whereas opportunities for male employment, particularly for skilled or semi-skilled manual occupations, diminished. In this period, the composition of the labour force in the UK also altered dramatically, shifting from a majority of jobs within construction, mining and manufacturing industries to the service industries. These kinds of shifts had a particular impact on working-class families, with high rates of male and female unemployment and an increase in female and child poverty.

The Education Reform Act (ERA) of 1988 had dismantled the partnership between central and local government, with schools now controlled by their governing bodies and parents. The ERA (1988) became the cornerstone for educational policy for the next decade, emphasising educational standards and quality, consumer freedom of choice and institutional autonomy. Of great significance for gender was the creation of a National Curriculum, covering 10 subjects to be taught to children between 5 and 16 years old, national testing (SATs) and the publication of performance league tables of schools' results for 16 and 18 year-olds (later widened to include 11 year-olds). The National Curriculum

encouraged a substantial growth in female take up of traditional 'male' subjects such as science and technical crafts. The pattern of subject choices which had been shaped by domestic educational ideologies was finally broken, ironically by Margaret Thatcher's Conservative government (Arnot et al. 1999). The model of a core or common curriculum was something that feminists had argued for since the 1970s. The National Curriculum ignored key gender concerns in the content of subjects, and failed to set up adequate monitoring procedures to ensure that gender differences would not emerge within subjects, nor did it provide adequate training for teachers, governors and head teachers on equality issues. Beneath the veneer of the equitable overt curriculum was a 'hidden' curriculum which stressed competition and individualism above collectivist egalitarian principles.

By the end of 18 years of Conservative Party rule, examination results had made the educational achievements of girls and boys publicly visible and schools could be held accountable for gender inequalities. However, although equal opportunities had been listed as a cross-curriculum theme by policy-makers in 1988, it was viewed as too sensitive a subject to merit development. There was no official commitment to monitoring sex bias in schools or in education more widely. At the same time, the marketisation of British society had had its own impact on social inequality. The gap between the rich and the poor widened, as Britain became what Hutton called a '30:30:40' society (Hutton 1995: 14 quoted in Arnot et al. 1999).

As educational policy in the late 1980s and 1990s became more centralised and managerialism took over, the balance of feminist activity shifted away from school-based and teacher-focused interventions towards central government agencies (such as the QCA and OFSTED). The 'ad hoc' and 'alternative' character of many of the earlier feminist initiatives generated by committed individuals and groups at local level were now represented as politically contentious, and the outcomes unpredictable and non-finite.

The new organisational practices also appeared to cut across feminist-identified styles of working which had tended to be more 'open, democratic, friendly, and collaborative, and less confrontational and competitive' (Marshall, 1985). Also, with a focus on such practices as target setting, service delivery, efficiency and 'quality', the kind of managers such managerial cultures required were less likely to be women or men sympathetic to feminist issues. In the context of these new managerial regimes of 'line management', clearly defined job descriptions, bounded responsibility, and spheres of competence and expertise, educational feminism itself had to change. Indeed, the new managerialism was viewed as representing a male performance-oriented culture (Ball 1990; Maguire & Weiner 1994).

Feminism, always 'a theory in the making' (Hooks, 1984) again showed itself adept at meeting the need to change. Significantly, feminists were appointed to inspector and advisor posts in LEAs and received training in new managerial techniques. Criticisms of previous feminist work for weaknesses in planning, and failure to distinguish between long- and short-term goals were addressed. Gender policy-making was now broken down into smaller, more manageable parts with appropriate performance indicators. There was a shift in the language of gender around performance and away from social justice. And there was a growing interest

in targeting specific groups of girls who were now considered in the new language to be 'underachieving' rather than oppressed.

In this new performance culture, young men were characterised as disadvantaged, masculinity was understood to be in crisis and boys were being 'lost' by the increased competition from women and by an allegedly feminised school system. Girls' raised examination performance in school leaving exams at 16 (GCSE) had produced a reversal of previously male-dominated examination patterns. However, the lack of job opportunities for young unskilled males also offered little incentive for them to work harder at schools. Traditional male working-class jobs requiring physical strength had all but disappeared. Whole communities were devastated as mines, steelworks, ship-building yards, docks and other heavy industries were closed altogether or subject to massive downsizing and rationalisation. It was apparent to many young men that however hard they worked at school, the jobs just were not there.

Paradoxically, educational feminism had done much to prepare girls for the demands of a technological world, and the necessity of studying science and mathematics (although, paradoxically less so, for technology). However, boys were less well prepared for any attempt by government to broaden their curriculum (historically heavily focused upon the craft subjects, mathematics and science). There were few attempts, at this point, to encourage boys to engage more positively, for example, in the creative or performing arts or humanities. By the time the new Labour government under Tony Blair came into power, gender inequalities were again strongly on the political agenda, although this time in the name of boys.

#### NEW LABOUR, THE AMBIGUITIES OF GENDER AND OPPOSITIONAL EDUCATION FEMINISM

The concept of gender equality in education was problematic for a New Labour government which sought to distance itself from the 'old left' modernist politics of the 1970s and 1980s. The transformation of social democracy in Europe, the need to respond to increasing globalisation and the desire to sustain neo-liberal agendas around choice and excellence were not conducive to strong egalitarianism. Whilst New Labour did not completely abandon social democracy, particularly in relation to its interventionism in the labour market, it failed to address the concerns of education feminists regarding the continuing problems facing women in society. Although the educational statistics revealed only very small gender gaps (except in literacy for boys), gender power relations had not been effectively challenged either in the family, the work place or political life. Economic, political and social capital still appeared by the turn of the new century to be the privilege of men, especially those within ever more powerful elite groups.

The late 1990s and early twenty-first century witnessed the substantial closing of the gender performance gap at 16 and 18. Far more boys and girls achieved examination passes at school, although girls had improved their results even more than boys. There was now a 10 per cent gap in the achievement of girls and boys at GCSE. These national aggregates suggest that boys have lost their advantage in terms of school leaving credentials and are now struggling to keep up to girls'

success rate. A similar redistribution of educational credentials at 18 is also evident as girls match, if not better, boys' performance. The proportion of girls and boys achieving the top grades at 18 (A levels) differed only by 0.1 in 1995. Girls now had equivalent access to higher education. A wide range of statistical patterns suggested that girls were now successful at science and mathematics from a very early age through to 16. However, the loss of girls after this age in these subjects militates against their continuing into scientific and technological careers. The evidence suggests that science, maths and technology are becoming even more masculine subjects at 18 than before (Arnot et al. 1999).

Another problematic aspect of these national statistical data is the boy/girl categorisation. In the 1970s this categorisation had been challenged by socialist and black feminists as failing to take account of the interface between different social inequalities and their complex combined effects. The failure of government to monitor the educational performances of different groups of girls and boys, masks the enduring if not increasing gaps between middle- and working-class children, and between children from different ethnic minority groups (Gillborn and Mirza 2000). Key to egalitarian traditions would be the task of sorting out which girls and which boys succeed and which fail within contemporary performative school cultures (e.g. Teese et al. 1995).

Preliminary evidence from Australia suggests that boys outperform girls in gaining the highest grades, particularly in the sciences (Teese 2000: 103-118; Teese and Polesel 2003: 220-221). Without a breakdown of the top grades (B and C grades at 16 years, and A and B grades at 18), it is unclear whether gender is really now irrelevant to school outcomes. Not only are there very large class gaps amongst girls themselves but the pattern of relative advantage over boys for the socially most advantaged girls is far from clear. Statistics of subject achievement, although rarely available, suggest that social class differences exist in, for example, chemistry enrolment and achievement (Teese, Lamb, Helme & Houghton 2006 forthcoming). These patterns have shown that while white girls from higher SES families now take chemistry more frequently than boys from the same backgrounds, it is boys who outperform girls when it comes to the highest grades of achievement. In other words, even middle-class girls from professional backgrounds do not translate their higher levels of participation into equally high levels of competitive success. From this follows less access to university courses leading to medicine, other clinical sciences, and even non-science courses which require high aggregate marks.

The failure to use more discriminating measures of relative achievement (such as high grades) or to use a range of measures, including both enrolment rates and high grades (as in physics) permits the view that boys are underachieving and thus turns resources away from improving girls' education (Teese et al. 1995).

Neo-liberal reforms of both the Thatcher years and New Labour appear to have increased the social class and ethnic gap in relation to average educational achievement (Gillborn and Mirza 2000). Social class and ethnic inequalities in educational achievement at 16 appear to have been aggravated rather than reduced by such reforms.

*The 'Boy Turn'<sup>2</sup> in Educational Research and Policy Making*

Concern about boys' education grew out of school leaving data but also evidence of the lack of progress of boys in closing the achievement gap in literacy and language-related subjects. Data collected from national assessments at the age of 7 demonstrate that girls get off to a better start at reading than boys and that the lead they establish in English is maintained at 11 and at age 14 (Arnot et al. 1998). It appears that a sizeable gap between boys and girls in reading and English is sustained throughout compulsory schooling. By 2000, approximately 15 per cent more girls than boys obtained high grades in English examinations at age 16 (DfEE 2000). The fact that boys have not reduced this female 'advantage' in language-related subjects is understood to be one of the principal reasons why they have lost overall ground in compulsory schooling in comparison with girls.

Boys' problems with literacy have triggered a whole range of different responses from government, teachers and schools and from gender researchers (c.f. Ofsted 1993; QCA 1998). Media commentators argued that schools favoured girls by remodelling the curriculum in line with female learning needs (c.f. Epstein et al. 1998). Similarly, boys' disaffection was linked to the dominance of women teachers, particularly amongst those working with the younger age groups. One answer was to recruit more male primary teachers to make the school more 'boy-friendly'. Yet often pedagogic strategies confirmed masculinity rather than challenged it. Teachers moved strategically away from more child-centred progressive modes of teaching towards more traditional highly structured and teacher-controlled pedagogies as a means of combating what is often seen as adolescent boys' immaturity (Arnot and Gubb 2001). Paradoxically this shift may have strengthened boys' sense of insecurity and aggravated disaffected masculinities (c.f. Arnot 2006).

The responses of educational feminists and the Labour government to male education are complex and contradictory. Educational failure is explained by drawing on outmoded socialisation theories rather than employing contemporary understandings of gender identities and subjectivities. Sewell (1998), for example highlighted the different black masculinities, whilst Frosh et al., (2002: 264) noted that 'British masculinities (as others) are socially constructed from within a culture in which sexual, racial and class inequalities are still deeply imbedded, and these are reflected in the ways in which boys make sense of themselves, in what they take to be acceptable and what they oppose'. The outcomes for many of the most disadvantaged boys and girls of Labour educational policies therefore may well turn out to be more socially divisive than successfully integrative.

*New Labour's Education and Employment Policies*

In contrast to its educational policies, New Labour has intervened in relation to gender inequalities in the economy. As Patterson (2003) argues, Labour politicians draw upon what he calls a form of weak 'developmentalism' to address the

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<sup>2</sup> I have borrowed this concept from Weaver-Hightower (2003).

requirements of globalisation as well as a revamped European form of social democracy which allows for state intervention in the name of both economic progress and redistribution. The latest PSI survey found that gender inequalities in the labour market were larger than those of ethnicity or even class and have particular importance therefore in the context of encouraging re-skilling, modernisation, efficiency and competitive performance of the economy (Forbes 2002). In the 1970s, shortages of skilled scientific labour were recognised as holding back economic progress (Arnot and Miles 2005). Yet despite the Equal Pay Act 1970, the then-Labour government did not promote gender equity in its interventions into the corporate economy. When the Labour Party took office in 1997, gender segregation of the workforce and pay inequalities were substantial and embedded in traditional employment practices.

The current Labour government set about encouraging the economic sector to create more diverse, less male-centric domains, improve the rights of access to all forms of employment, create more conducive 'micro-cultural' work conditions for men and women and ensure a better work-family balance. Various ministries offer modernising policies to encourage women into productive work, and especially into science and engineering. The Women and Equality Unit (WEU) significantly was moved in 2003 into the Department of Trade and Industry. DTI has taken on responsibility for the new single equality body, the Commission for Equality and Human Rights, which will assume the EOC's gender issues and include matters relating to race, disability, age and sexuality. A stream of reports give employers incentives to modernise their gender profiles, to recruit women, and foster female enterprise. However, the problems of female low pay, part-time work and continuing correlations of motherhood with childcare have not been effectively tackled. Women still outnumber men in service industry employment, whilst men outnumber women in managerial and administrative positions. The 'mother gap' which disadvantages women with children is large by international standards, and badly affects teenage mothers and low-skilled women. The EOC (2001a) highlights the continuing 'life cycle of inequality' which faces many women because of their low pay.

Despite this egalitarian rhetoric around gender equity in training and employment after age 16, the modernisation of the economy is associated with increasing income differentials between women of different social classes and their families. The ambition of raising national skill levels by New Labour has been partially thwarted by continuing patterns of gender differentiation in choices of vocational courses and careers. The gender skills gap is embedded in young people's sex stereotypical choices of pre-vocational programmes and in GNVQs, NVQs, Modern Apprenticeships and further and higher education courses (EOC 2001b). Twenty-five years after the Sex Discrimination Act 1975, sex stereotyping is extensive in vocational course choices with large groups of girls still choosing to train as hairdressers and boys as car mechanics and computer specialists (EOC 2001b). Care, childcare, hairdressing and beauty therapy are predominantly female whilst the overwhelming majority of students in construction, manufacturing, information technology and motor industry courses are male. Yet despite such extensive gender differentials, the Labour government has pursued a policy of uncoupling the National Curriculum and introducing a more flexible range of

work-related courses for 14-16 year-olds. Increased flexibility in the school curriculum, as many gender experts have warned, will run counter to the desire to de-gender the workforce and working practices in the UK economy.

Gender equality as an economic goal tends to benefit those most able to benefit, the professional middle classes, thus increasing the economic and social divisions between women and their families. The new social policy framework which focuses on tackling single mothers' and children's poverty and discrimination in the work place may reduce the obstacles which women face in bettering their lives. However, as David (2000: 48) points out, the 'ideological push for individuality, the adult worker model combining family-work balance may also distance women from the educational development of their children'.

In 1997, the Social Exclusion Unit which Blair said would ensure 'social cohesion and not social division' offered new approaches to tackle youth crime and truancy. However, these focused on parental (especially female) responsibilities rather than societal structures and government economic policies:

All this points to the discursive repositioning of family and state responsibilities but what is of real significance is the placing of gender at the heart of state actions: the 'out of control' and uneducable boy is in need of reigning in; the parent at home, oftentimes the single parent/mother, is made responsible for and penalised for his actions; at the same time, she is culpable in the production and sustenance of family poverty by not having a real job, and will be further penalised by changes to tax and benefit support (Raphael Reed 1998: 64-65).

Social exclusion as a concept is masculinised, often defined as a problem for boys in general or for a particular group of boys. Osler and Vincent (2004) found that most of the practices dealing with school exclusion are designed with boys in mind, even though girls represent 'one in four of those subject to formal, permanent disciplinary exclusion from secondary school' in 2000/1. This meant some 1,566 girls were permanently excluded from school in that year (DfES 2002). Many more girls are subject to fixed-term disciplinary exclusion, are unofficially excluded (for example, when parents were asked to find alternative schooling for their daughters) or are self-excluding by truanting. Policy makers have failed to take account of the systemic problems of feelings of isolation, personal, family and emotional problems, bullying, withdrawal or truancy, and the disciplinary action taken against girls: thus,

.....for many girls informal and unrecognised exclusion is as significant as formal disciplinary exclusion. It can restrict or deny girls their right to education and lead to more general social exclusion (Osler and Vincent 2004: p 3).

The needs of pregnant young women, young mothers and young women involved in complex personal relations are not necessarily supported by adults. Only recently have new ideas been developed to work with girls in addressing their particular needs (for example, Cruddas and Haddock 2003).

In sum, Walkerdine, Lucey and Melody (2001: 2) argue that, so powerful are the 'discourses/rhetoric of internationalism and progressivism', that egalitarianism associated with traditional forms of social democracy is offered little space within the Labour manifesto:

The Blair government is fully committed to globalism and its attempts to reduce the welfare state are quite in line with monetarist practice. By and



large it sees its job as the humane management of an inevitable global shift. In this context, for social democrats, the end of 'welfarist dependency' and words such as autonomy, grass roots organisation and social capital provide the basis for a mode of government with some element of personal control at a time of profound but inevitable change.

The production of girls in this context is now 'complex and problematic': girls and women are being remade into the 'modern neo-liberal subject, the subject of self-invention and transformation who is capable of surviving within the new social, economic and political system' (Walkerdine et. al. 2001: 3). However, the new concept of the autonomous, self-managing 'new psychological subjects' is only applicable to middle class girls, particularly from the professional middle classes:

The terrible and central fact is this: it is social class that massively divides girls and young women in terms of their educational attainment and life trajectories. Indeed we suspect that the situation is even worse than it had been in the 1960s and 1970s, despite the expansion of higher education. Via a hard and painful route, a small minority of [working-class girls in their study] got to university and then to professional careers, but most did not succeed at school and entered the poorly paid labour market. The gains of the 1960s and 1970s have been shown to be ephemeral and it is wishful thinking, to pretend that class has disappeared either as a tool of analysis or as a concrete fact (Walkerdine et al. 2001: 4).

These authors challenge what they see as the triumphalist tone of the Labour Party's think tank Demos' analysis of 'Tomorrow's Women' (Wilkinson et al. 1997) which celebrated the rise in women's participation in the labour market. They argue that 'women's position in the new economy is not comfortable' (Wilkinson et al. 1997: 216). The future, rather than being 'rosy' is in fact distorted by the realities of widening social class differences.

The 'boy turn' in educational policy making is associated not only with an 'end game' for national girls' educational policies (Lingard 2003), but also with a re-masculinisation of policy discourses. Raphael Reed (1998: 65) suggests that the new policy language now uses a 'masculinist and bellicose language imagery offering to use 'tough love', 'hit squads', 'a name and shame approach', 'zero tolerance of failure', 'silencing the doubts of cynics and the corrosion of the perpetual sceptics'. She argues that 'improving schools and boys' performance seems to be predicated on the restitution of hegemonic forms of masculinity and gender oppressive practices, (1998: 73). Not only are 'empowering and powerful counter discourses' unavailable but neither are broader curriculum approaches which could address the 'fears, anxieties, displacements' (1998: 73) and effects of this new pedagogic context.

Paradoxically, at a time when many more women enter schools as teaching assistants, the masculine language of 'technical rationality' privileges teacher accountability over professionalism. Mahony (2003) argues that in England this has consequences for gender reforms since teachers are made to feel powerless, teacher training neglects equity issues and management structures in schools are not conducive to the development of gender equality programmes. By 2000, the publication, 'Whatever Happened to Equal Opportunities in Schools?' (Myers

2000), suggested that the activism of the 1980s around gender equality and particularly girls' education had been lost.

Mahony argues that long before Labour came to power, feminism was seen as part of the problem not part of the solution (Mahoney 2003: 75). Thatcherism and the fragmentation of the women's movement contributed to this view. The allegedly more 'inclusive' policy making of Labour could have challenged this. However, in reality, Labour's commitment to policy continuity with the Conservative government meant that a similar aversion to feminist egalitarianism was hidden in the 'softer, less aggressive and overtly threatening version of the politics of the Third Way'. Gender became part of the redistributionist discourse in which poverty is explained in cultural terms, in which inclusion means 'labour market attachment', in which inequality is redefined as social exclusion. Even when citizenship education is called into play to aid social inclusion, stronger egalitarian notions of social justice and rights are marginalised and traditional gendering of public and private spheres is reinforced (Arnot 2006b).

## REFLECTIONS

The historical narrative of education feminism and the struggle to achieve gender equality in society through education demonstrates a number of key issues. I can only touch on a few here. It is important to note that education feminism is one of the most vibrant social movements of the late twentieth century and that it has successfully established the terrain of the sociology of women's education and also of feminist scholarship in the field of education. Most of this narrative is dependent not upon official evaluations but on the research writing and actions of teachers, academics and youth themselves who have been questioned endlessly about their lives and aspirations. The lessons learnt about how best to tackle gender inequality and gendered power relations are lessons learnt from over a hundred years of struggle for female citizenship. The picture that I have painted is only another chapter in that narrative.

What are the key lessons learnt? The first must relate to the power of economic infrastructure to set the terms under which gender equality reforms operate. Demographic factors as well as economic expansion, stagnation and restructuring all affect the significance and acceptable limits of gender inequality in society. The social contract between men and women is one which, although challenged, remains arguably at the core of Western European societies, built into social policy, built into work conditions, and built into family life. The power which this contract gives men over women is both the target of and the brake on gender reform. The struggle by women for access to education as a social right and of access to policy making as a civic right has been relatively successful, especially for the professional middle-class women. Not only is the category 'girl' (which provided the leitmotif of the women's movement) now rejected by postmodern poststructuralist theory, but also such success creates the conditions for greater social polarisation of middle-class and working-class women and their children.

Male power relations have been sustained within the labour market despite educational transformations. A key lesson here is the limited power of education to change male dominance and hierarchy in the labour market and sex segregation of the labour force. Indeed the long shadow of work still genders the job and career expectations of young people today, despite the fluidities and flexibilities promised by a postmodern risk society. Sex segregation, discretionary status and unequal pay within a gender-differentiated work force have characterised the late twentieth and early twenty-first century. Such fields as the sciences and mathematics, and elite institutions such as universities and professional training have been challenged by feminist scholarship but this has led often to retrenchment.

The last fifty years have seen girls acquiring high level school qualifications and breaking through a considerable number of glass ceilings. Some of the gender gaps in national statistics on access, subject choice and performance have closed. But whether women's understanding of their agency, capabilities and power is strengthened by this examination success is debatable. The nature of science, mathematics and technology which girls are now more successful at is hardly one that is built upon the principles of education feminism. The forms of knowledge and of schooling would need to encourage positive female representation and female agency. The female diligence and study habits which lead to examination success are not necessarily those which create a strong sense of critical political consciousness, nor are they necessarily valued at higher levels. The Can Do girls suffer anxiety and a lack of confidence (Walkerline et al. 2001). The contradiction between women's educational qualifications and their lower levels of access to economic, political and social power together with the demands of family life militate against their sustaining such success as adults.

Education feminism as a social reform movement has shown that, although successful in redefining the political/ideological terrain for the younger generation, it cannot of its own reshape economic structures. Access to elite forms of knowledge within a hierarchical curriculum described once by Bourdieu and Passeron (1977) as an aristocratic knowledge requiring an aristocratic relationship to it, does not guarantee economic and social capital. Scholastic capital gained through their school success is not necessarily convertible, nor is it converted into these other forms of privilege for women. As this historical narrative has shown, national statistics mask social structural effects which divide social classes and ethnic/racial groups. These other social positionings and hierarchies are to be found 'within' gender categories. Liberal feminism had been satisfied with gaining women access to male structures rather than reforming or uncoupling these internal gender structures. Although girls are often thought to be the most adaptable as learners (Arnot et al. 1998), not all girls are equal. Indeed, there is too much of a tendency now to view all girls as successes and all boys as failures (Arnot and Mac an Ghail 2006). This is far from the truth and indeed teachers' experience.

In the last ten to fifteen years, the re-masculinisation of education policy has failed to pursue these issues, to measure social and race inequalities within and between genders, and to develop a viable explanation for the persistence of gender inequalities. The success of this gender re-socialisation project, so challenged in the 1980s, begs the question about whether women have been as well served as they

might by such a perspective. The realities of racial and social class inequalities, gendered violence and female marginalisation are still present in the educational system and in society, but there is little political purchase now in focusing on such structures.

The social thrust of New Labour education policies has already been dulled by assumptions about schools and teachers having a bigger impact on achievement differences than social class, so the apparent victories of girls only further weaken the case for equity and concentrate attention on the most visibly marginalised groups, who tend to be male and whose problems are considered to be social rather than educational. In the end all the issues around access to hierarchical domains of learning in the school curriculum, relative quality of instructional experience in those domains, access to a hierarchical university system, etc., are papered over.

New Labour has attempted to shore up the inequalities which ironically are exposed by a marketised system of education. Such inequalities cause embarrassment by disturbing the success of that educational project. The agenda around inclusion begs the question about the place of gender in twenty-first century society. On what terms should women be included within a pluralist and diverse society? Should gender remain a category at all or should it, as Ulrich Beck (1992) argued, be abandoned in order to engage with the strictures of a new highly individualised risk-based society? But in practice, gender identities are the means by which individuals make sense of the world and find moments of celebration in the face of adversity. The next phase of gender equality reform will need to address the individualisation of gender identities associated with late modernity.

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## 12 The Lagging Participation of Girls and Women in Maths and Science Education

*Annemarie van Langen and Hetty Dekkers*

### INTRODUCTION

In recent decades the education level in most western countries has increased (OECD 2005). A higher percentage of the population participates in higher forms of schooling, while a smaller percentage drops out of school without a basic diploma. A significant part of this change is due to girls' increased participation rates. In most western countries more women than men participate in the upper levels of secondary schooling and in higher education. As a consequence, the education level of the adult female population has also increased more strongly than the male and in most western countries more women than men in the younger age group (aged 25-34) have a higher education diploma. This stands in contrast to the situation a decade ago. Female pupils and students have made clear inroads during this period.

Looking at international PISA, TIMSS and PIRLS test scores from a large number of countries, the relative achievements of girls with respect to boys are positive as well (Martin et al. 2004; Mullis et al. 2003, 2004; OECD 2003, 2004a/b). In virtually every western country participating in these studies, girls do better than boys in reading and language. The differences can be described as small to moderate and occur in all phases of primary and secondary education. Boys generally do better than girls in mathematics and sciences, but, first, these differences are smaller than for reading and language and, second, in various countries this lead has completely disappeared in the upper school years.

When we consider educational indicators such as repeating classes, early school leaving and returns on higher education, the present-day position of girls and women in a number of western countries appears to be better than that of boys and men (van Langen & Driessen 2006). In American primary schools boys repeat classes considerably more often than girls while the same holds true for Dutch, Flemish and Swedish secondary education. International EU figures show that more men than women in the 18-24 age range are early school leavers (i.e., dropping out of school without a basic diploma). And in countries such as the Netherlands and the United States returns on higher education appear to be higher for women than for men, as indicated by the speed with which female students graduate and the lower percentage of female drop-outs.

From the picture emerging above it can be concluded that the educational position of girls and women according to level, achievements and student flows has become quite favourable in most western countries. At the same time, however, a number of international studies show stubborn differences regarding the way the genders are divided across courses and sectors in secondary and tertiary education. More specifically, girls and women are highly underrepresented in maths and science courses and in science, technology, engineering and mathematics (in short: STEM) fields of study. This applies to all western countries, although by no means to the same extent. The Netherlands (the authors' country) is noteworthy for extremely low female STEM participation rates both in secondary and tertiary education. The latter is illustrated in Table 12.1.

*Table 12.1: Percentages of Tertiary ISCED-5A<sup>1</sup> Qualifications Awarded to Females in STEM Fields of Study in 2001. Source: OECD, upon request.*

	Engineering, manufacturing & construction	Physical sciences	Mathematics & statistics	Computing	Mean
<i>Australia</i>	21.7	35.6	37.7	25.5	30.1
<i>Austria</i>	17.3	27.3	40.8	11.0	24.1
<i>Belgium</i>	20.4	35.1	45.5	16.3	29.3
<i>Czech Republic</i>	29.9	37.9	45.9	7.0	30.2
<i>Denmark</i>	22.5	35.4	45.0	19.2	30.5
<i>Finland</i>	19.4	45.4	39.1	33.9	34.5
<i>France</i>	23.8	37.5	43.3	19.2	30.9
<i>Germany</i>	20.5	28.0	44.1	12.1	26.2
<i>Hungary</i>	27.6	36.5	22.2	21.1	26.9
<i>Iceland</i>	21.2	53.5	20.0	19.4	28.5
<i>Ireland</i>	26.1	47.8	48.6	38.7	40.3
<i>Israel</i>	23.4	39.4	34.2	x	32.3
<i>Italy</i>	27.6	42.3	62.5	27.1	39.9
<i>The Netherlands</i>	12.4	25.7	26.9	14.0	19.8
<i>New Zealand</i>	31.7	N/A	28.6	28.6	29.6
<i>Norway</i>	21.6	33.3	32.7	18.6	26.6
<i>Poland</i>	24.0	64.5	75.4	22.9	46.7
<i>Spain</i>	28.5	51.1	55.1	23.4	39.5
<i>Sweden</i>	27.8	43.0	35.9	40.1	36.7
<i>Switzerland</i>	12.1	21.6	22.0	12.4	17.0
<i>United Kingdom</i>	19.3	39.8	40.4	24.8	31.1
<i>United States</i>	21.4	38.2	45.3	29.2	33.5

Notes: 1: Including advanced research programmes;

x: data included in column Mathematics & statistics; N/A.: not available



The lagging participation of girls and women in maths and science education is the common underlying theme of a large research program conducted by the Radboud University Nijmegen in the Netherlands. In this paper, some results from this program are reported. First, we examine the determinants of participation in maths and science education among Dutch upper level secondary school pupils. Next, international differences in the female participation in higher education STEM courses are explored in relation to the size of gender achievement gaps in secondary education.

### *Vertical and horizontal inequality*

In the aforementioned research program the systematic underrepresentation of girls and females in maths and science education is taken to be an expression of unequal educational opportunities or, in short, educational inequality. In general, two forms of education inequality can be distinguished. ‘Vertical education inequality’ refers to unequal opportunities among certain groups in society to reach a high education level. The research along these lines is typically aimed at determining which aspects of earlier school career predict the final level of educational attainment. Among the aspects examined are: achievement in primary and secondary school, level of secondary education, repetition of grades, early dropout and graduation. The most well-known disadvantaged groups in connection with vertical educational inequality are pupils from lower socioeconomic classes and ethnic minorities. Girls initially belonged to the group of disadvantaged pupils as well, but as we saw in the previous section their vertical educational position has improved considerably. By now, vertical inequality is much more linked to social class and ethnicity than gender.

‘Horizontal educational inequality’ concerns the differences between groups with respect to their distribution across educational sectors, because comparable vertical positions are often linked to unequal opportunities for further training, education and employment. Research on horizontal educational inequality is aimed predominantly at those points in the school career where pupils progress in different directions as a result of decisions and selection procedures with particular study and professional prospects either being opened or closed as a result.

In the Netherlands as well as in a number of other western countries, the number of higher education pathways increases to the extent that pupils in the upper levels of secondary education have chosen more maths and science subjects (van Langen & Dekkers 2005). In addition, the professional opportunities of STEM students in most western countries are relatively favourable due to the global pursuit of a knowledge economy and the current shortage of science workers in the job market (European Commission 2002, 2004). It can be argued that the link between field of study and employment prospects is sensitive to market fluctuations and that the more favourable prospects for STEM graduates are therefore not fixed, by definition. Nonetheless, the current educational and societal opportunities for individuals choosing maths and science subjects and STEM fields of study are definitely greater than for individuals choosing from a number of other subjects and fields of study. In our research program the underrepresentation of girls and women

in secondary and tertiary maths and science education was therefore interpreted as a form of horizontal educational inequality.

*Reproduction theory and the meritocratic ideal*

Since the start of educational inequality research in the 1960s, the elimination of educational disadvantages has been a topic of heated debate. Two different lines of thought, known as reproduction theory and emancipation theory, can be detected (Coleman et al. 1966; Jencks 1972). Reproduction theory asserts that the existing social inequalities on the basis of ascribed characteristics such as gender, SES and ethnic background continuously reproduce themselves through education as a result of primary and secondary socialisation processes (Bowles & Gintis 1976; Bourdieu 1977; de Graaf, de Graaf & Kraaykamp 2000; van Zanten 2003). According to emancipation theory, in contrast, education can reduce social inequality via the promotion of individual mobility. Emancipation theory is also linked to the meritocratic ideal of education; in a meritocratic society, pupils acquire position on the basis of personal aptitude (i.e., merit) and not because of their gender or family background (Dekkers & Bosker 2004; Young 1958).

Over the years, a large amount of research has been conducted on the determinants of students' subject and study choices (e.g., Ainley & Elsworth 2003; Dryler 1998; Jonsson 1999; Marjoribanks 2002; Uerz, Dekkers & Béguin 2004; van der Werfhorst, Sullivan & Cheung 2003). The factors found to play a role can be placed within the aforementioned field of tension regarding the reproductive versus meritocratic nature of education. The influence of gender, social class and ethnic origin, and various socio-cultural expressions of such on the choice of subjects and studies provides evidence of the reproductive function of education. The influence of pupil achievement, in contrast, is in keeping with a meritocratic line of thinking. In addition, attitudinal characteristics such as interest, motivation and effort play a part in subject choices. Whether their role can be viewed as meritocratic is open to debate. Some experts are of the opinion that attitudinal characteristics are as much a part of personal aptitude and accomplishment as achievement (and are therefore meritocratic), while others argue that attitudinal characteristics are a product of socialisation (and therefore serve a reproductive function) (Dekkers 2002). Contextual characteristics of the school or country also influence subject choice; whether this influence contributes to a more meritocratic education depends on whether these effects strengthen or neutralise the reproductive effects of various sociocultural background factors.

In the next two sections, some results from our research program on the lagging participation of girls and women in maths and science education<sup>1</sup> were examined in light of the meritocracy-reproduction debate. More specifically, determinants for the take-up of mathematics and science courses in upper secondary and tertiary education were considered further in order to determine whether secondary and tertiary education are largely reproductive or meritocratic in the respect.

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<sup>1</sup> For more information on this research program, see dissertation van Langen (2005).

*The choice of mathematics and science subjects in Dutch upper secondary education*

After two years of basic curriculum, pupils in Dutch secondary education progress to one of three levels. The two highest levels are HAVO (*hoger algemeen voortgezet onderwijs*; senior general secondary education) and VWO (*voorbereidend wetenschappelijk onderwijs*; university preparatory education). Pupils successfully completing their final examinations in HAVO or VWO can, in principle, pursue tertiary study.<sup>2</sup> Whether or not they are admitted to a tertiary STEM course nevertheless depends upon their final examination subjects, which are chosen in the third or fourth years of secondary school. The pupils are required to choose from four secondary education curriculum streams, each with its own specific and fixed combination of subjects. The four so-called study profiles are: culture & society, economics & society, science & health and science & technology. In both science profiles, chemistry, pure mathematics and physics are mandatory subjects and successful completion of the final examinations for either of the science profiles provides direct access to a subsequent STEM course. However, only certain parts of the curriculum are required for the science & health profile, while the complete curriculum is mandatory for the science & technology profile. The chances of a pupil actually progressing to a STEM tertiary course are therefore much greater with a science & technology profile than with a science & health profile. Pupils who have completed their final examinations in a society profile have no direct access to a STEM course and generally have a smaller number of tertiary admission options than those who completed either of the two science profiles.

The mandatory selection of one of four study profiles was introduced in 1998 by the Dutch government to help pupils gain greater insight into their aptitudes and possibilities for the future. This suggests that the individual capacities of pupils exert a major influence on the study profile choice, presumably at the cost of such background characteristics as gender and social or ethnic background. Our study explored this assumption in greater detail with respect to the choice of a science study profile. The underlying research questions were as follows.

- To what extent is the choice of a science study profile in present-day Dutch upper secondary education based on personal achievement or influenced by ascribed characteristics such as gender and family background?
- What other factors at the levels of the pupil, family and school appear to influence the choice of a science study profile?

Quantitative analyses were performed on the data from the national VOCL '99 cohort involving pupils who started secondary school in 1999/2000 and whose school progress was assessed on an annual basis. The cohort was largely representative of the national population of pupils and schools (Kuyper & van der Werf 2003). The final research sample for the present study included 3513 HAVO and VWO pupils from this cohort who were by then in year 5 of secondary education. The database used contained the chosen study profiles, the pupil test scores for mathematics, Dutch language and general skills in year 1 and 3 of secondary school, and the results from written questionnaires administered to the

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<sup>2</sup> Both levels prepare pupils for tertiary education, but VWO is of a higher level than HAVO. Including the two year basic curriculum, the HAVO takes five years and the VWO six years.

pupils, parents and schools in the first three years of secondary school. An ordinal variable was constructed to represent the degree of mathematics and science content in the study profiles. A value of 0 was assigned to the society profiles; a value of 1 was given to the science & health profile; and a value of 2 was assigned to the science & technology profile. This variable served as the dependent variable in our multilevel analyses, which were based on an ordered multi-categorical response model (Goldstein 1995).

In the first phase of the analyses, only the effects of the background variables (gender, parental level of education and ethnic origin) on the one hand, and the achievement variables (test scores and actual level of education, i.e., HAVO or VWO) on the other hand, on the degree of maths and science in the chosen study profile were examined. From the standardised results of this phase, we concluded that the degree of mathematics and science in the chosen study profile was most strongly predicted by the maths score attained in the third year of secondary school followed by gender and the maths score in the first year of secondary school. Three other variables contributed less but equally: actual level of education, Dutch language scores in the first year (negative) and the parental level of education. No significant differences in the degree of mathematics and science in the chosen study profile for minority versus native Dutch pupils were found and none of the interaction terms were significant. Of the total variance in the dependent variable, 23.8 per cent was explained.

These results gave us the answer to our first research question. Achievement measures referring to the personal aptitude of the pupil contributed most to the degree of mathematics and science in the chosen study profile. This is in keeping with the meritocratic educational ideal in which the personal capacities of the individual pupil determine school success and school career. The influence of gender should not be trivialised, however, nor should the influence of parental level of education, which was relatively limited but nevertheless significant and independent of the influence of the other variables. Given equal levels of test achievement and involvement in the same level of secondary education, boys and the children of highly educated parents tend to choose study profiles with a higher degree of mathematics and science content than girls and the children of low educated parents.

In the second phase of the analyses we examined which other factors after pupil achievement, gender and parental level of education contributed to the degree of maths and science in the chosen study profile. A number of other variables were found to exert a significant effect. Seventy-eight per cent of the total amount of variance in the dependent variable was explained, which is very high.

Many of these explanatory variables involved attitudinal characteristics of the pupil, such as interest, motivation and evaluations of subjects and teachers. The question of whether these findings provide evidence for the meritocratic or reproductive character of Dutch upper secondary education remains to be answered. If personal aptitude is understood in the widest sense of the word and such attitudinal characteristics are also, thus, understood to be a part of pupil achievement or accomplishment, then a considerable portion of the variables found to exert a significant effect on the degree of maths and science in the chosen study profile can

be construed as meritocratic. Whether such attitudinal variables should be treated as purely personal accomplishment and not at least in part as an outcome of socialisation is nevertheless central to the question and also depends on the operationalisation of the variables<sup>3</sup>. It is even more crucial to consider such issues given that our data show that interest in and enjoyment of maths and science subjects is generally much lower for girls than for boys.

Several variables concerning the recommendations of the parents and the teachers also appeared to significantly influence the choice of study profile after controlling for actual achievement; these certainly do not belong to the category of personal accomplishment. It is noteworthy that the recommendations of the parents, moreover, played a larger role than the recommendations of the teachers. Fifteen- and sixteen-year-old children confronted with the choice of study profile are thus strongly influenced by their parents, and this finding is by definition not meritocratic.

The schools in the sample differed significantly in the average degree of maths and science in the study profiles which their pupils selected. This was found to depend on the extent to which the school made explicit attempts to stimulate the choice of a science profile. This variable was collected via the school questionnaire and concerns the school policy with regard to the choice of study profile. The majority of the schools (75 per cent) indicated that their policy was to steer the choice of a study profile as little as possible. In those schools where efforts were explicitly made to have as many pupils as possible choose a science profile, a study profile with a higher degree of maths and science was in fact chosen more often.

When the implications of our findings for actual practice were considered, the extremely low percentage of girls in our (largely representative) research sample choosing a science & technology profile stood out: at the level of HAVO, this was slightly more than 1 per cent of all girls; at the level of VWO, no more than 7 per cent. In contrast, at the level of HAVO, some 25 per cent of the boys in our sample chose the science & technology profile; at the level of VWO, as many as 36 per cent (Figure 12.1).<sup>4</sup>

The extent to which the maths scores in the third year of secondary school for girls selecting a science & health profile deviated from the scores for boys selecting a science & technology profile was also examined. The numbers show the averages for the two groups differed significantly, but the achievement ranges for the two groups overlapped considerably. Many of the girls in a science & health profile thus achieved as well in the third year of secondary school as many of the boys in a science & technology profile.

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3 A good example of this is motivation of which two types are usually distinguished. Internal motivation ('I choose those subjects which I like') appears to be more related to disposition and thus innate while external motivation ('I choose those subjects which will be useful later') appears more the product of socialisation.

4 The national Dutch figures on study profile choice are largely comparable to those of our research sample.

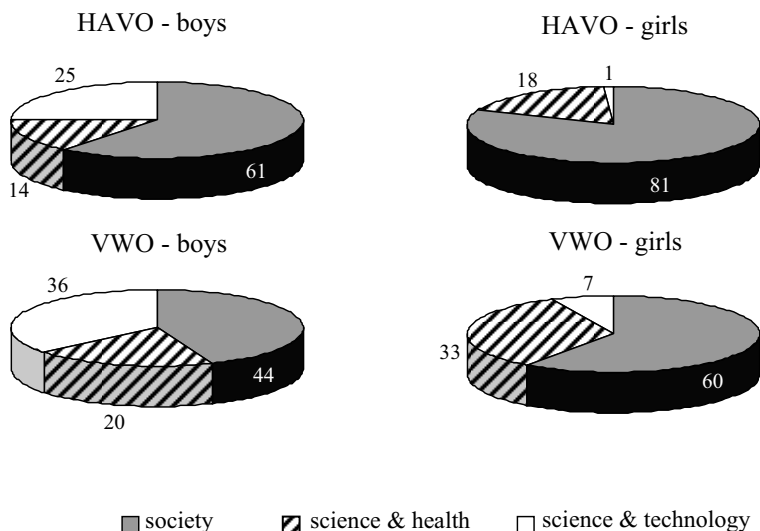


Figure 12.1: Chosen Study Profiles in Research Sample according to Educational Level and Sex

The present findings show Dutch secondary education still has a reproductive component, even within the relatively homogeneous HAVO and VWO levels of secondary education. The science & technology profile appears to be almost exclusively the domain of boys, with an overrepresentation of the children of highly educated parents. Maths achievement in the third year of secondary school for a considerable portion of the girls who go on to choose the science & health profile is nevertheless very similar to that for the boys who take up the science & technology profile. Given that the aim of the Dutch government is to stimulate greater STEM study choice, the question of whether the development of two science profiles was such a good idea can be raised. Pupils (mainly girls) who opt for the lower degree of maths and science associated with the science & health profile, limit their options for tertiary STEM study, even when their prior achievement does not make this necessary.

The results of our study suggest that at least with respect to the selection of a maths and science course of study the meritocratic calibre of the Dutch system of secondary education leaves much to be desired. As a consequence, optimal use of the available mathematics and science talent, particularly that of girls, is currently not being made. And assuming that the attitudes of pupils and their parents are not purely related to aptitude, a change of attitudes within the present policy context still appears to be the obvious means to realise a greater choice of science profiles among both boys and girls.

## EXPLORING CROSS-NATIONAL DIFFERENCES IN GENDER GAPS IN EDUCATION

In Table 12.1 in the first section of this chapter, we showed the underrepresentation of female graduates within STEM fields of study is generally greatest for engineering, manufacturing, construction and computing and lowest for physical sciences, mathematics and statistics. Rather remarkable are the considerable cross-national differences: the highest means occur in the final column for Poland, Ireland, Italy and Spain while the Netherlands and Switzerland have extremely low means. Also in the first section, we reported that according to international comparative test scores from the PISA study<sup>5</sup> (along with international studies such as TIMSS and PIRLS), girls generally do better than boys in reading while the opposite holds for mathematics and sciences, but to a smaller extent. However, PISA data also show that the size of the gender achievement gaps — in other words, the relative distance between the average levels of achievement for boys versus girls — varies considerably across countries for the three fields of study.

In the research study presented here, the relationship between these findings was examined. The study considered whether the size of national gender achievement gaps in secondary education were related to female STEM participation in higher education, which also varies across countries. In addition, just which country characteristics appear to be related to the national gender achievement gaps was examined.<sup>6</sup> The following questions were addressed.

- Is there a relationship between the size of the gender achievement gaps in secondary education and female STEM participation in tertiary education across countries?
- Are the observed gender achievement gaps associated with particular characteristics of countries?

Multilevel analyses were conducted on the data for 2000 and 2001 from the international comparative PISA study on the mathematics, science and reading literacy of 15-year-old pupils. The analyses involved 224,058 pupils from 42 countries.

As mentioned above, PISA data show that girls generally lag behind boys in maths and science literacy and the opposite is the case for reading literacy<sup>7</sup>, while at the same time the size of the gender achievement gaps varies considerably between countries. In relation to this, the initial analyses calculated across PISA countries

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5 The Programme for International Student Assessment (PISA) is an internationally standardised assessment that was jointly developed by participating countries and administered to 15-year-olds in schools. The first two cycles, PISA 2000 and PISA 2003 have been completed while the PISA 2006 cycle is well underway. In all PISA cycles the domains of reading, mathematical and science literacy are assessed.

6 The data revealed gender achievement gaps to vary considerably across schools within countries as well. In a related study using the same database, the observed gender achievement gaps were therefore also associated with particular characteristics of the schools (van Langen, Bosker & Dekkers, 2006).

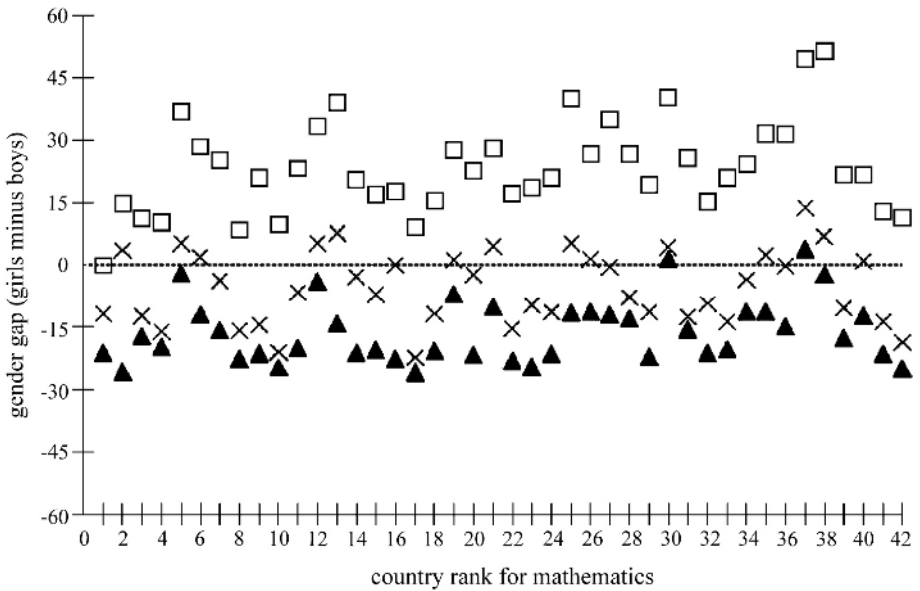
7 In terms of standard effect sizes: -0.139 for maths, -0.048 for science, and +0.217 for reading literacy

revealed a remarkable pattern: the correlations between the relative position of the girls with respect to the boys for the three fields of achievement for each country were very high, from 0.76 for mathematics and science to 0.85 for mathematics and reading. This means that in countries where girls lag *less* behind boys in mathematics and science, they also are *more* ahead of boys in reading. Conversely, in countries where boys lag *less* behind girls in reading they also are *more ahead* of girls in mathematics and science. There are countries where the mathematics literacy of girls does not lag behind that of boys at all (e.g., New Zealand, Iceland, Finland, Albania, Thailand) but in keeping with the foregoing observation the reading proficiency of the boys in these countries then lags considerably behind the reading proficiency of girls.

This is demonstrated in Figure 12.2 where the positions of girls relative to the boys in the three fields of achievement for the different PISA countries are presented. In the figure, the countries are listed according to their international mathematics literacy rank. The results show the size of a country's gender gap (i.e., girls' minus boys' score) in mathematics achievement to be separate from the country's level of general mathematics achievement. The lowest average mathematics score is attained in Peru while the highest average mathematics score is attained in the Netherlands, yet in both countries the mathematics achievement of girls lags behind that of boys to an almost equal extent.

The correlations between the various gender achievement gaps in secondary education as estimated on the basis of the PISA data and the national participation rates for women in tertiary STEM courses (as shown in Figure 12.1, drawing from OECD data) were calculated next. Rank correlations were estimated between the participation rates for women in tertiary STEM studies and the relative achievements of girls with respect to boys in secondary education with the effect of a country's average socioeconomic status partialled out. High correlations varying from 0.44 to 0.52 were produced for the mathematics, science and reading gender gaps, which means that as the relative secondary achievement of girls with respect to boys improves, female tertiary STEM participation also improves. In other words, the major underrepresentation of women in the tertiary STEM sector, as evident in the Netherlands, is associated with a major delay in the mathematics and science literacy of girls with respect to boys in secondary education. This relative delay on the part of girls appears to be more relevant for the non-choice of a tertiary STEM field of study than the high mathematics achievement of girls in absolute numbers in the Netherlands relative to other countries (see Figure 12.2). To understand this, we must realise that the lower position in mathematics of Dutch girls relative to Dutch boys is perceived daily and would thus have a greater effect on their self-confidence than their higher position relative to girls in other countries.





□: reading; X: science; ▲: maths (width of 90% confidence interval: app. 10 points)

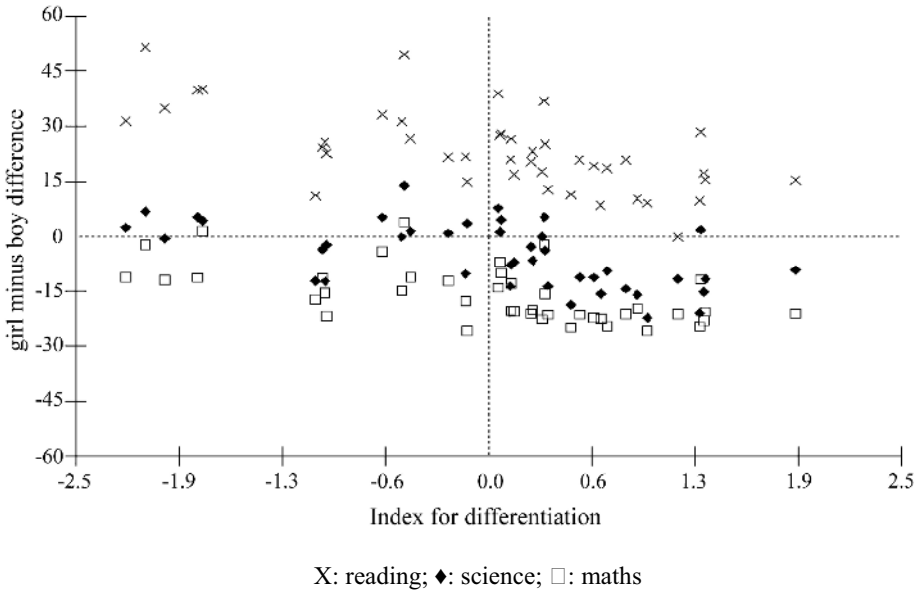
1	Peru	15	Italy	29	France
2	Brazil	16	Portugal	30	Iceland
3	Indonesia	17	Poland	31	Denmark
4	Chile	18	Hungary	32	Belgium
5	Albania	19	Russian Federation	33	Switzerland
6	Argentina	20	Spain	34	United Kingdom
7	Macedonia, TFYR	21	United States	35	Canada
8	Mexico	22	Austria	36	Australia
9	Bulgaria	23	Germany	37	New Zealand
10	Israel	24	Czech Republic	38	Finland
11	Greece	25	Norway	39	Korea, Rep. of
12	Thailand	26	Ireland	40	Japan
13	Latvia	27	Sweden	41	Hong Kong, China (SAR)
14	Luxembourg	28	Liechtenstein	42	Netherlands

Figure 12.2: Gender Gaps for Three Fields of Achievement related to Country's General Maths Rank (from weakest to strongest performance)

We then attempted to explain the variation in the secondary education gender achievement gaps across countries. The results of our analyses showed integrated educational systems to be generally more favourable to the achievement of girls relative to boys than differentiated educational systems. The index of the degree of integration for the national educational system was created using eight indicators from the PISA databank: grade differentiation, track differentiation, the maximum number of tracks existing within the educational system, socioeconomic segregation, gender segregation, and quality differences in mathematics, science and reading literacy across schools (for more information, see van Langen, Bosker & Dekkers 2006).

In Figure 12.3, the gender achievement gaps for mathematics, reading and science literacy are plotted against this index. On the left hand side of the figure, those countries with a non-selective, integrated education system and little or no segregation are represented. According to our index, Canada has the most integrated system with marginal quality differences between schools, little or no segregation with respect to socioeconomic status or gender, a comprehensive system and almost all 15-year-old pupils placed in the same grade. Belgium, in contrast, has the most differentiated educational system in terms of both its structure and selection processes. For gender achievement gaps in mathematics, science and reading literacy, the following general pattern can be seen to exist: the more integrated the educational system of the country, the smaller the gender achievement gap for mathematics and science literacy (i.e., the less girls lag behind boys) and the larger the gender achievement gap for reading proficiency (i.e., the greater the lead of girls over boys). In short: the relative position of girls with respect to boys is generally more favourable within such integrated systems.

How should this finding be interpreted? A possible explanation, derived from social comparison theory, might be that since differentiated systems are tracked by definition, in such systems students of the same general ability level are homogeneously grouped irrespective of their gender. On average then, achievement differences are small, and other aspects, like gender, may become the basis for social comparison, and typically this may lead to less self-confidence. In an integrated system however, where achievement differences are more pronounced and are more likely to be the basic dimension for social comparison, the comparison turns out to be more favourable and will lead to more self-confidence for girls. In other words, in differentiated systems the more salient dimension for social comparison might be gender, while in integrated systems it might be achievement itself.



-2.20	Canada	-0.14	Korea, Rep. of	0.50	Netherlands
-2.08	Finland	-0.13	Brazil	0.55	Czech Republic
-1.96	Sweden	0.06	Latvia	0.64	France
-1.76	Norway	0.07	Russian Federation	0.68	Mexico
-1.74	Iceland	0.07	United States	0.72	Germany
-1.05	Indonesia	0.13	Switzerland	0.83	Bulgaria
-1.01	United Kingdom	0.14	Liechtenstein	0.90	Chile
-0.99	Denmark	0.15	Italy	0.96	Poland
-0.98	Spain	0.26	Luxembourg	1.15	Peru
-0.64	Thailand	0.27	Greece	1.28	Israel
-0.53	Australia	0.32	Portugal	1.28	Argentina
-0.51	New Zealand	0.34	Albania	1.30	Austria
-0.47	Ireland	0.34	Macedonia, TFYR	1.31	Hungary
-0.25	Japan	0.36	Hong Kong, China (SAR)	1.86	Belgium

Figure 12.3: Gender Gaps for Three Fields of Achievement according to Integration/Differentiation of Country's Educational System

## DISCUSSION

Our research on the determinants of participation in a science profile by HAVO and VWO pupils in the Netherlands show pupil aptitude and achievement play an important role in their educational choices, which is clearly in line with the meritocratic assumption that the personal accomplishments of pupils should determine their school success. However, both gender and social class (as measured by parental level of education) were also found to play independent and significant roles in maths and science choice in both samples. This means that a reproductive component is still present in the upper levels of Dutch secondary education. At the same time, no effect of ethnic background was observed, which suggests that the choice of subjects is meritocratic in this respect.

The research also considered which other variables (after controlling for the influences of social background, gender and achievement) appear to influence the choice of a science profile. The results show that pupils' attitudes (e.g., interest, motivation, evaluations of subjects and teachers) play a significant role. When aptitude is interpreted in the broadest way possible (which is certainly not acceptable to everyone), these attitudinal factors can be considered as personal accomplishments, and thus as legitimate determinants of school success. And from such a perspective, the present findings provide some evidence of the meritocratic quality of education as organised today. However, parental characteristics also influence maths and science choice even after the influences of achievement and aptitude have been taken into consideration. Parental characteristics are not within the power of the individual pupils to influence and therefore fail the meritocratic test.

School characteristics which play a significant role in maths and science choice can either strengthen or neutralise the reproductive effects of sociodemographic characteristics. In the analyses conducted, no school effects related to a particular social group or the gender of the pupils were found. The finding that pupils more frequently choose a science profile when the school explicitly promotes this nevertheless shows how schools can contribute to better utilisation of the personal aptitudes and capacities of pupils.

The examination of between-countries differences in gender gaps in education indicates that the conclusions we drew about the limited meritocratic nature of Dutch secondary education hold true for tertiary education, both in the Netherlands and elsewhere, as illustrated by the significant underrepresentation of women in tertiary STEM courses. The reasons for this underrepresentation appear meritocratic, in that they have their basis in different achievement levels by gender in school. However, the fact that it is relative, rather than absolute achievement gaps, that impact on student choice suggests a reproductive element. Moreover, the gender achievement gaps noted clearly relate to other contextual characteristics such as the degree of differentiation in the education system, variables which have nothing to do with the personal accomplishments of students.

It can be concluded that the mathematics and science choice processes for HAVO and VWO pupils in the Netherlands but also for higher education students in the Netherlands and other western countries are not completely meritocratic in nature. A clear relationship still exists between the background characteristics of the

pupils and students, and the extent to which they choose maths and science subjects and STEM courses. And while vertical educational inequality is nowadays much more linked to social class and ethnicity than gender, it is unmistakable from the results in this chapter that gender is still the most important predictor of horizontal educational inequality in this area.

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## The Search for Gender Equality in English Education

*Molly Warrington and Mike Younger*

## AN END OF INEQUALITY?

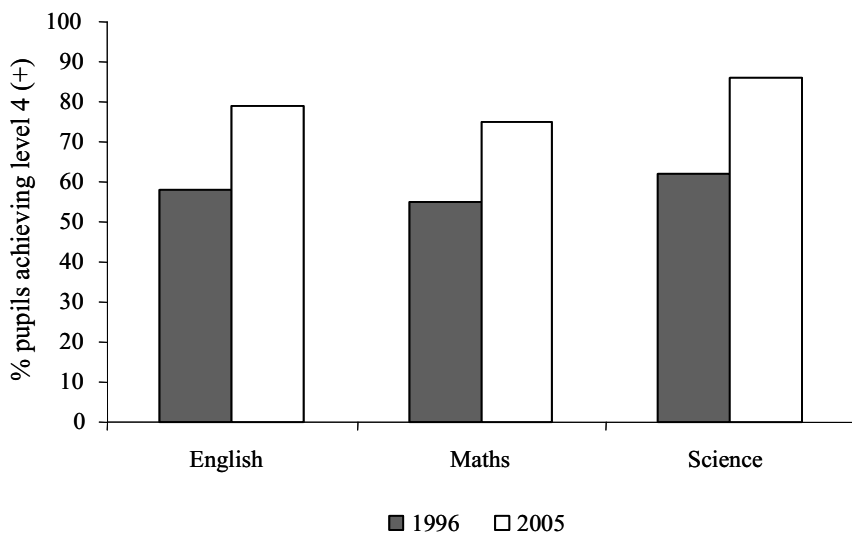
Educational policy makers and practitioners in England have devoted a great deal of energy over the last forty years to attempts to combat educational inequalities. The comprehensive schooling movement of the 1960s and 1970s (DES 1965), culminating in the abolition of the tripartite system of schooling in most parts of the country, was a bold endeavour, aimed at opening up opportunities for children from different social classes and challenging the fallacy of fixed ability and potential (Chitty 2004; Hart et al. 2004). At the same time, vigorous debate about forms of appropriate innovative pedagogy (Stenhouse 1970; Beddis 1974), curricula (Beck 2003) and grouping (Simon 1998) took place, as protagonists of the comprehensive ideal sought to ensure that the selective system would not be reconstructed within comprehensive schools. After the enactment of the Sex Discrimination Act in 1975, the debate became focused on the unequal and discriminatory experiences of girls at school and within the labour market (Myers 2000; Skelton 2001), and the educational policy emphasis was placed on whole-school equal opportunity policies as a means of opening up equality of access to girls (Whyte 1985; Arnot and Weiner 1987; Acker 1988). More recently, the focus has shifted again, as the discourse has been captured by concerns about males' apparent under-achievement, male values, aspirations and goals (Weiner et al. 1997; Francis 2000; Arnot 2002; Younger et al. 2005; Warrington et al. 2006).

In some respects, these initiatives have been successful. More children now achieve the 'benchmark' higher level grades in GCSE<sup>121</sup> examinations taken at the end of compulsory schooling; in 1974-5, for example, only 22 per cent of students gained five or more GCE grades, whereas thirty years later, 55 per cent of students achieved the benchmark grades. Although it is difficult to make comparisons within the primary sector of state education, because of the lack of formal national assessments of pupils' achievements before the 1990s, a comparison of the

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121 General Certificate of Secondary Education (GCSE) examinations, or their vocational equivalent, General National Vocational Qualifications (GNVQ), are taken by students at the end of the compulsory stage of education (in the school year when students reach the age of 16). They are graded on a nine-point scale (A\* - U, where A\* is the highest grade). Although a 'pass-fail' grading system does not officially apply, grades A\*-C have become conventionally regarded as 'higher level' pass grades, and government benchmarks are expressed in terms of the proportion of students achieving 5 or more of these higher level, A\*-C grade, passes. They replaced the more selective GCE (General Certificate of Education) examinations in 1988.

percentage of pupils achieving the ‘expected’ level 4 or above in National Curriculum Assessments<sup>122</sup> at the end of Key Stage 2 (at the age of 11, the usual age of transfer from primary to secondary schooling) in the three core subjects showed a marked rise in achievement over the ten-year period 1996 – 2005 (Figure 13.1). Whilst there is inevitably debate about the comparability of examinations through time, this is nonetheless a very significant achievement in both primary and secondary sectors, and is one indication of the success of initiatives to make state education more comprehensive.



*Figure 13.1: Achievements in end of Key Stage 2 National Curriculum Assessments 1996-2005*

Source: DfES Autumn Packages, 1996-2005: [www.dfes.gov.uk/rsgateway/DB](http://www.dfes.gov.uk/rsgateway/DB)

<sup>122</sup> National Curriculum tests are taken in the three core subjects of English, Mathematics and Science by all students in state maintained schools in England at the end of the school year when they have reached the age of 7, 11 and 14. Students’ performance is graded between levels 2 (low) and 7. Level 2 is the ‘expected’ level achieved by an ‘average’ student at age 7, level 4 at age 11 and level 5 at age 14..



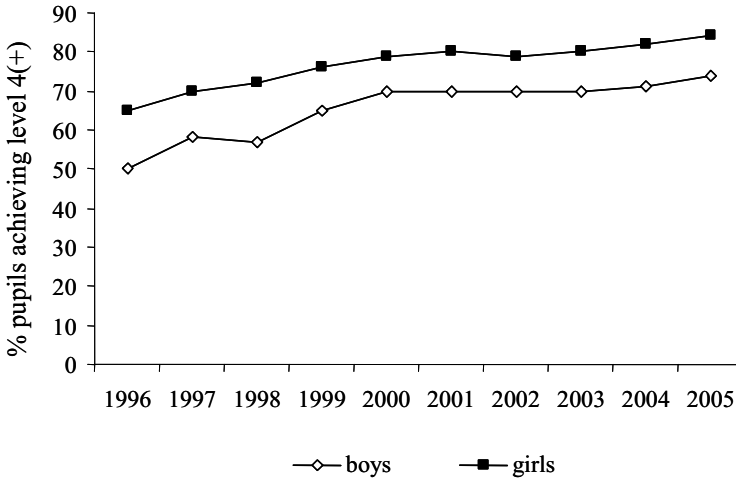


Figure 13.2: Achievements in end of Key Stage 2 National Curriculum Assessments in English, 1996-2005, by Gender

Source: DfES Autumn Packages, 1996-2005: [www.dfes.gov.uk/rsgateway/DB](http://www.dfes.gov.uk/rsgateway/DB)

At the same time, there have been significant gains in terms of girls’ educational achievements. In both primary and secondary schooling, girls have continued to outperform boys in National Curriculum Assessments, particularly in English, at the ages of 7 and 11 (Figure 13.2), and in virtually all subjects at 14 and 16 (Figure 13.3), although it should be noted that boys’ performances too have improved through time. This perpetuation and stability of the gender gap between boys’ and girls’ achievements (Arnot et al. 1998; Gorard 2000; Younger et al. 2005) has been seen by some as a cause for concern and alarm (Byers 1998; Hannan 1999; DfES 2003), and whilst any apparent inequality requires us to pause for thought, it is crucial to acknowledge and celebrate the very real achievements of many girls at school in the last decade (Weiner et al. 1997; Warrington and Younger 1999; Connolly 2004). The equal opportunities policies of the 1970s and 1980s were undoubtedly significant in this context, encouraging school cultures in which the aspirations and expectations of girls could be raised (Weiner et al. 1997), and in which sexist language and behaviour in the classroom, and gender bias in textbooks, could be challenged (Mahony 1985; Stanworth 1987; Myers 2000; Warrington and Younger 2000). The reduction of gender stereotyping in subject choices (Stables 1990; Walden 1991), together with the breaking of gendered patterning of occupational opportunity (McDowell 1997; Walby 1997), and the greater focus on working and caring roles for both women and men, suggested that some significant gains have been achieved by women in schools and in the labour market. Higher participation rates for women in post-compulsory secondary education and in university education reiterated this message; in achievement terms, too, 72 per cent of girls (compared to 66 per cent of boys) were awarded higher level grades (grades

A-C) in the 2005 GCE A-level examinations<sup>123</sup>, and 58 per cent of women graduated from university with a first class or upper second class degree compared to 51 per cent of men (NSO 2005).

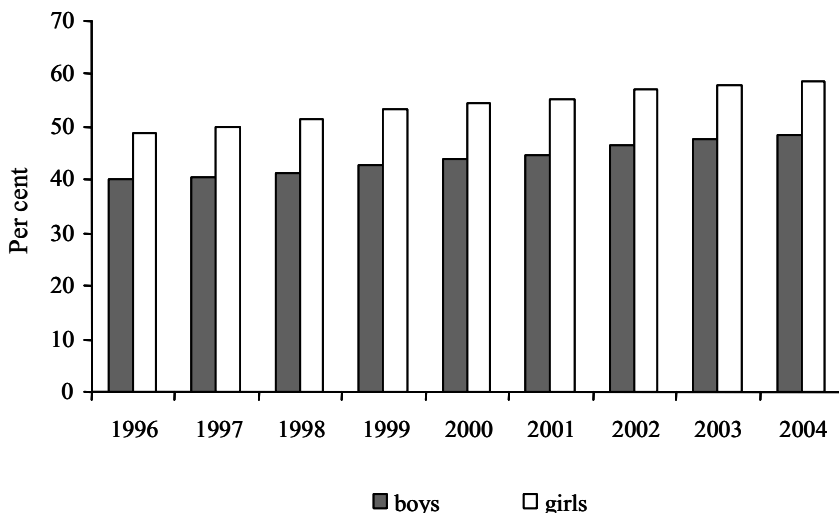


Figure 13.3: Per cent Entry of Boys and Girls achieving 5(+)\*-C grades at GCSE or equivalent, 1996-2004

Source: Younger *et al.*, 2005: 33

Much of the evidence suggests, though, that these indicators of increasing achievement and equality are, in some respects at least, illusory and deceptive. Only 38 per cent of boys and 44 per cent of girls achieved higher level grades in their GCSE examinations in the three core subjects of English, maths and science in 2005; indeed, 15 per cent of boys and 11 per cent of girls did not even record the lowest level grade (grade G) in each of the three subjects. Equally, there remains hidden under-achievement amongst girls, with fewer girls entered for higher level examinations in subjects such as Mathematics and Science at GCSE, despite their prior superior performance to boys in national curriculum tests at the end of key stage 3, and fewer girls opting for A-level courses in such subjects, despite matching boys' performance at GCSE (Delamont 1999; Warrington and Younger 1999). The impact of such gendered subject choices on career, work experience and employment continues to be persistent and discriminatory (Francis and Skelton 2005; Francis *et al.* 2005), and the invisibility and stereotypical expectations of girls held by *some* teachers remains (Jones and Myhill 2004; Jones 2005).

123 GCE Advanced level examinations are usually taken at the age of 18, by those students who 'stay on' for a period of post-compulsory education, prior to University / College entry.

## NEW FORMS OF INEQUALITY OR A GREATER AWARENESS OF OLD ONES?

It is clear that this debate about gender inequalities in English schooling is not a new one. Michelle Cohen (1998), in discussing a habit of healthy idleness in boys, has contextualised their relative lower achievement through the last two centuries, and challenged the 'fiction of boys' potential' (Cohen 1998: 133). Similarly, Arnot *et al.* (1998) have pointed to the higher level of girls' achievements in GCE examinations in the 1960s and 1970s, and it was well-established that entry to selective co-educational grammar schools in the immediate post-war period (1945-70) was based on lower test scores for boys than for girls, to prevent a gender imbalance within those schools and to ensure that enough boys were admitted (Gallagher 1997).

What is new, however, is the extent to which we can now identify gender inequalities in achievement throughout the state system in England, within both primary and lower secondary education, as well as in the final years of secondary education. The initiation of national curriculum testing at the end of Key Stage 3 meant that data became available for the first time in the mid 1990s which allowed national comparisons to be made of students' achievements at 14+. Within the primary sector, there had been little emphasis on formal summative assessment in English primary schools throughout the 1970s and 1980s, and pupils' attainment was not assessed in any standardised way across the nation before the implementation of the National Curriculum and the associated standard assessment tests and teacher assessments at 7 and 11 in the early 1990s (Warrington *et al.* 2006). So the introduction of a standard and comprehensive system of assessment provided, in theory at least, a wealth of data on students' performance and achievement. Within a few years, these data had been made accessible, through websites and statistical releases from the Department for Education and Skills (DfES), to government and to the broader educational community. The extent of this new data, their availability and their accessibility, enabled precise identification of differences and inequalities to be made on an annual basis, and to make comparisons within national, regional and local authority contexts (Gray *et al.* 1999, 2003, 2004; Jesson 2004; Schagen and Hutchinson 2003). At the same time, inequalities were identified on the basis of social class, albeit through using somewhat unsatisfactory surrogate measures, and between different ethnic groups, and were brought firmly within the public domain (Fitzgerald 2005; Phillips 2005).

The data need critical analysis, however, since they reflect a narrow perspective on education (James 1998), and an over-reliance, particularly in the primary sector, but increasingly also in the end of Key Stage 3 tests<sup>124</sup>, merely on pupils' test performance in literacy and numeracy (Alexander 2000). Equally, the data are generated by government's increasing involvement in surveillance and control, with an emphasis on standards and performativity (Mahony 2003; Arnot and Miles 2005). The outcome is often a narrowing of the curriculum, and a lack of spontaneity and creativity in the classroom, as teachers feel restricted by the need to perform, and to ensure that their students reach centrally-imposed targets. The resulting emphasis on

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124 Key Stage 3 covers the 11-14 age range, and National Curriculum tests are taken by students at the age of 14.

school accountability, on schools' positions within national, local authority and neighbourhood league tables, and on competition between schools (Brehony 2005; Warrington et al. 2006), consumes a great deal of energy in schools, as they attempt to improve the performance of borderline students (Gillborn and Youdell 2000; Younger and Warrington 2006), and to present their own performance in the most favourable light.

There is the need to interpret national, local and school-specific data with considerable caution, therefore, and to acknowledge the very real ways in which the performativity agenda has distorted the educational agenda in English schools (Arnot and Miles 2005). Accepting this, and the shortcomings of national data (Goldstein 2001; Gray et al. 2003), it is nonetheless clear that we do now have a much more detailed understanding of the nature of educational inequalities within English schools, at different scales. We are able better to identify 'under-achievement' where it exists in students of varying abilities, to acknowledge the real achievements of some 'lower achieving' students and the 'under-achievement' of some of high ability, and to devise more targeted policies to help enable equal opportunities for all (Younger and Warrington 2006).

### *Patterns of Inequality*

We have discussed elsewhere (Younger et al., 2005) how gender concerns in English education have become dominated by discussions of boys' apparent under-achievement, and how this 'boy-turn' (Weaver-Hightower 2003) has been as prominent in England as in Australia (Teese et al. 1995; Lingard 2003), the United States (Majors 2001) and mainland Europe (Johannesson 2004; Van Houtte 2004). It is clear that, at a national level, these inequalities between girls' and boys' academic performance in examinations and national curriculum tests continue to exist (Figures 13.1-13.3). Indeed, the most recent available data show that in 2005, 52.2 per cent of boys achieved the benchmark 5(+) A\*-C grades at GCSE, compared to 62.0 per cent of girls, revealing a gender gap of 9.8 percentage points which has been more or less stable since the mid 1990s (1995 data reveal a gender gap of 10.1 percentage points, when 38 per cent of boys and 48.1 per cent of girls achieved comparable levels of achievement). As we continually emphasise, however, the trajectory of results shows a distinct and relatively under-celebrated upward trajectory on the achievements of both girls and boys.

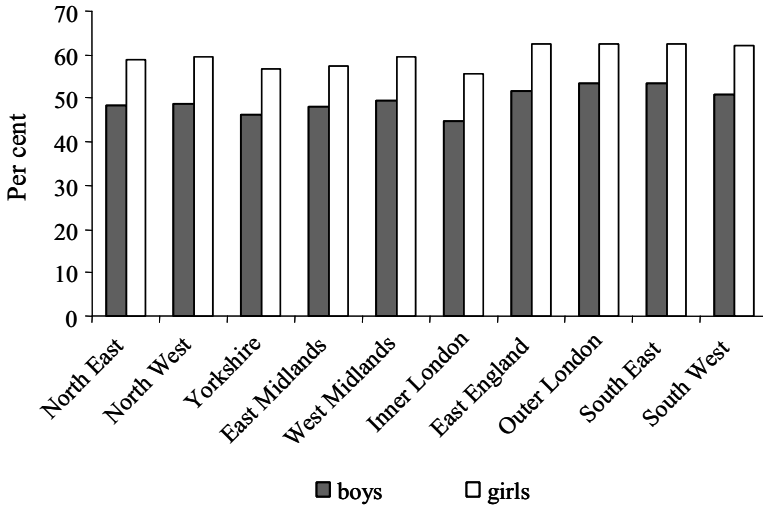


Figure 13.4: GCSE and Equivalent Results of Students at the End of Key Stage 4, 2004-05, by Government Region

Source: [www.dfes.gov.uk/rsgateway/DB/SFR/s000631](http://www.dfes.gov.uk/rsgateway/DB/SFR/s000631)

A regional analysis, however, reveals distinct contrasts, with the achievements of both girls and boys appreciably higher in Southern and Eastern England, and in Outer London, than in the Midlands and the North, and in Inner London (Figure 13.4). When the analysis is pursued at local authority level, the distinction becomes even more stark (Table 13.1a), with 16 of the 18 ‘lowest performing’ local authorities (those where local data are at least 10 percentage points below national average data for *both* boys and girls) located in the North and the Midlands. The spatial locations of these local authorities have much in common, broadly coincident with inner city locations, and areas which suffered deindustrialisation during the 1970s and 1980s; social deprivation and long-term unemployment persist, and the need for urban renewal and regeneration schemes remains a priority. In some instances, too, the drift of the more affluent middle classes to suburbs and rural peripheries, has represented a loss of some of those parents who might possess the time, knowledge and cultural capital to support and influence schools in these areas, and has exacerbated the cyclical nature of inner city decline. Table 13.2, in contrast, identifies those local authorities where a higher proportion of girls and boys achieved at the benchmark grades than nationally, and not surprisingly confirms the concentration of these local authorities in the southern half of the country (9 of 15), and in suburban (9 of the 15) and in rural shire (6 of the 15) localities.

Table 13.1a: Local Authorities in England where Both Boys' and Girls' Achievement in GCSE / Equivalent Examinations in 2004-05 was at Least 10 Percentage Points Below National Average Levels

Region	Local authority	% pupils achieving 5(+) A*-C GCSE grades / equivalent		Gender gap (in favour of girls)
		boys	girls	
<i>North East</i>	Middlesbrough	41.1	50.3	9.2
<i>North West</i>	Manchester	37.7	49.8	12.1
	Salford	39.0	52.0	13.0
	Blackpool	33.3	48.7	15.4
	Knowsley	38.7	51.0	12.3
<i>Yorkshire/Humber</i>	Kingston-upon-Hull	38.4	50.3	11.9
	NE Lincolnshire	39.2	45.9	6.7
	Barnsley	39.9	51.6	11.7
	Doncaster	37.9	50.8	12.9
	Sheffield	41.6	52.0	10.4
	Bradford	41.3	51.8	10.5
<i>East Midlands</i>	Leicester City	40.6	50.6	10.0
	Nottingham City	39.4	43.6	4.4
<i>West Midlands</i>	Coventry	41.0	52.0	11.0
	Sandwell	39.1	47.2	8.1
	Walsall	41.2	51.3	10.1
<i>Outer London</i>	Greenwich	42.1	49.1	7.0
<i>South West</i>	Bristol	32.5	40.8	8.3
<b>England</b>		<b>52.2</b>	<b>62.0</b>	<b>9.8</b>

What is notable in this analysis, however, is the complexity of the message about gender inequalities which emerges. In most of the local authorities identified in tables 13.1a/13.1b, the gender gap is within 3 percentage points of the national average, suggesting that *both* girls and boys are achieving at lower levels than nationally. It is not simply the case that boys are achieving less well than girls, but rather that both are equally disadvantaged in these areas. The low levels of achievement of many boys and girls in local authorities such as Blackpool, where virtually 19 per cent fewer boys achieve the benchmark grades than nationally, and Bristol, where 19.7 per cent fewer boys and 21.2 per cent fewer girls achieve national benchmarks, remains a cause of very serious concern in a modern, post-industrialist society, evidencing high levels of educational deprivation and disadvantage.

*Table 13.1b Local Authorities in England where either Both Boys' and Girls' Achievement in GCSE / Equivalent Examinations in 2004-05 was at Least 10 Percentage Points Below National Average Levels*

Region	Local authority	% pupils achieving 5(+) A*-C GCSE grades / equivalent		Gender gap (in favour of girls)
		boys	girls	
<i>North East</i>	Redcar/Cleveland	(44.9)	51.6	6.7
<i>North West</i>	Blackburn/Darwen	40.5	(54.2)	13.7
<i>Inner London</i>	Islington	(42.8)	45.6	2.8
	Westminster	34.0	(59.4)	25.4
<i>South East</i>	Southwark	(45.2)	49.1	3.9
	Reading	(45.3)	47.4	2.1
	Southampton	39.7	(54.6)	14.9

*Table 13.2: Local Authorities in England where Both Boys' and Girls' Achievement in GCSE / Equivalent Examinations in 2004-05 was at Least 5 Percentage Points Above National Average Levels*

Region	Local authority	% pupils achieving 5(+) A*-C GCSE grades / equivalent		Gender gap (in favour of girls)
		boys	girls	
<i>North East</i>	Gateshead	60.9	69.9	9.0
<i>North West</i>	Trafford	65.9	74.7	8.8
<i>Yorkshire / Humber</i>	North Yorkshire	57.2	68.5	11.3
<i>East Midlands</i>	Rutland	65.5	67.5	2.0
<i>West Midlands</i>	Shropshire	57.8	69.4	11.6
	Solihull	61.3	67.2	5.9
<i>Outer London</i>	Barnet	59.4	69.6	10.2
	Bromley	63.0	65.0	2.0
	Kingston-upon-Thames	59.5	75.0	15.5
	Redbridge	66.9	73.0	6.1
	Sutton	64.8	71.4	6.6
<i>South-East</i>	Buckinghamshire	62.4	73.1	10.7
<i>South West</i>	Bath/NE Somerset	59.7	67.2	7.5
	Poole	60.2	67.6	7.4
	Gloucestershire	57.6	68.3	10.7
<b><i>England</i></b>		<b>52.2</b>	<b>62.0</b>	<b>9.8</b>

Table 13.3 Achievements of Students in England, in Key Stage 2 National Curriculum Assessments, by Ethnicity and Gender, 2004

	Key Stage 2					
	% students achieving level 4 (+) in NC assessments					
	English		Mathematics		Science	
	boys	girls	boys	girls	boys	girls
<i>White</i>	72	84	75	74	87	87
<i>Mixed</i>	74	85	73	74	86	87
<i>Asian : Indian</i>	79	87	80	79	87	87
<i>Asian: Pakistani</i>	61	74	62	60	72	73
<i>Asian: Bangladeshi</i>	66	77	68	65	77	77
<i>Asian: other</i>	70	81	77	77	82	82
<i>Black Caribbean</i>	61	79	58	64	75	81
<i>Black African</i>	63	76	62	65	74	76
<i>Black: other</i>	64	78	63	65	77	82
<i>Chinese</i>	76	87	89	90	88	90
<i>Any other ethnic group</i>	61	71	70	69	75	76
<b>All students</b>	72	83	74	73	85	86

Source: [www.dfes.gov.uk/rsgateway/DB/SFR/s000564](http://www.dfes.gov.uk/rsgateway/DB/SFR/s000564)

This level of analysis can be localised further of course, within local authorities, by comparing performance indicators across schools, although a detailed consideration of such local differences is beyond the scope of this chapter. It is true, however, that the development of more sophisticated value-added measures whereby students' achievements at a certain age can be compared against their own prior achievements and those of similar students in different schools (Gray et al. 2004; DfES 2004), do make such comparisons more valid than in the past, by offering some measure of school effectiveness within their local context of catchment area and students' characteristics, and occasionally revealing complacent and 'under-achieving' schools within socially and economically favoured localities. More often, however, such comparisons of schools at the micro-scale usually confirm patterns of social inequalities within local contexts, with lower levels of achievement reflecting less favourable environments and higher levels of deprivation (Bradford 1991; Gordon 1996; Higgs et al. 1997; Davies 2000).

Increasing sophistication of data analysis has also confirmed the continuing existence of inequality within different ethnic populations (Gillborn and Mirza 2000; Cole 2004; Warren 2005) and social classes (Furlong and Furlong 2003; Connolly 2006). The data on pupils' achievements, by ethnicity, both in Key Stage 2 national assessments and in GCSE examinations highlight particularly starkly the variations between ethnic groups. Whilst the gender gap only deviates significantly at Key Stage 2 from the national norm for Black Caribbean and Black African pupils, as a consequence of boys' lower performance levels, there are significant disparities from national norms in the case of pupils from Indian and Chinese populations, where both boys and girls (and particularly Indian boys) record high levels of



achievement, notably in English and Mathematics (Table 13.3). Conversely, the achievement levels of pupils from other ethnic minority populations are lower than national averages, particularly amongst children of Pakistani, Bangladeshi, Black Caribbean and Black African heritages. Similar disparities are evident in the pattern of GCSE results, with much higher proportions of Chinese, Indian and other Asian boys and girls achieving national benchmarks (Table 13.4); thus whilst the gender gap remains close to the national average, achievement rates are such that around 15 per cent more Indian students and 22 per cent more Chinese students achieve five or more higher level passes at GCSE (Francis & Archer 2005). At the other extreme, cohorts of Pakistani, Bangladeshi, Black Caribbean and Black African students perform at levels significantly below average, reflecting the pattern established at the end of primary schooling.

Table 13.4: Achievements of Students in England in GCSE and Equivalent Examinations, by Ethnicity and Gender, 2004

	GCSE and equivalent % students achieving 5 (+) A*-C grades	
	boys	girls
<i>White</i>	47.4	57.4
<i>Mixed</i>	44.8	54.4
<i>Asian : Indian</i>	61.6	71.9
<i>Asian: Pakistani</i>	38.8	52.1
<i>Asian: Bangladeshi</i>	41.0	55.2
<i>Asian: other</i>	54.8	65.9
<i>Black Caribbean</i>	27.3	43.8
<i>Black African</i>	37.3	48.9
<i>Black: other</i>	29.8	43.0
<i>Chinese</i>	69.5	79.1
<i>Any other ethnic group</i>	43.0	54.4
<b>All students</b>	46.8	57.0

Source: (www.dfes.gov.uk/rsgateway/DB/SFR/s000564)

A similar argument can be made about social class differences. Although the index used (FSM: Free School Meals<sup>125</sup>) is very much a surrogate measure, with several imperfections, it is the most accessible measure currently available, and an analysis on a national level reveals stark disparities between students who are not eligible for FSMs and those who are registered as eligible (Table 13.5). Again, these disparities are less stark between boys and girls, but at the end of Key Stage 2, far

125 FSM: Free School Meals: this is a surrogate measure used to give some indication of the affluence of the social background of pupils. Although it is only an approximate index, in that some families do not claim the free school meals to which their children are entitled because of social stigmatism, it is widely used as a surrogate index for social class in the United Kingdom, and is the most accessible index available. Crudely interpreted, it is likely that the higher the proportion of children claiming free school meals, the greater the level of disadvantage/material poverty within the community.

fewer students who are eligible for FSMs achieve the ‘expected’ national level. This becomes increasingly significant as students’ length of schooling increases, with more apparent disengagement and lower levels of achievement at 16 than at 11; thus in GCSE examinations, the proportion of boys and girls who are eligible for FSMs and who achieve 5 or more higher level GCSE passes is less than half the proportion recorded by students who are not eligible for FSMs (Table 13.6).

What remains lacking, to date at least, is more accessible aggregate data which brings together issues of ethnicity, gender and social class, and presents a more holistic spatial picture of achievement within and between different communities and localities, which would allow for a more detailed analysis of the intersections between the different demographic and social facets. Currently, however, the increasing sophistication of data available, and the increased emphasis on the measurement of students’ performance, despite the shortcomings discussed above, have enabled us to have a more coherent and detailed perspective of the nature of educational inequalities within England in the early years of this new century.

*Table 13.5 Achievements of Students in England in Key Stage 2 National Curriculum Assessments, by Free School Meals and Gender, 2004*

	Key Stage 2					
	% students achieving level 4 (+) in NC assessments					
	English		Mathematics		Science	
	boys	girls	boys	girls	boys	girls
<i>Not Eligible for Free School Meals</i>	76	86	78	77	89	89
<i>Eligible for Free School Meals</i>	51	66	55	55	71	71
<b><i>All students</i></b>	72	83	74	73	85	86

Source: [www.dfes.gov.uk/rsgateway/DB/SFR/s000564](http://www.dfes.gov.uk/rsgateway/DB/SFR/s000564)

*Table 13.6 Achievements of Students in England in GCSE and Equivalent Examinations, by Free School Meals and Gender, 2004*

	GCSE and equivalent	
	% students achieving 5 (+) A*-C grades	
	boys	girls
<i>Not Eligible for Free School Meals</i>	50.8	61.4
<i>Eligible for Free School Meals</i>	22.1	30.2
<b><i>All students</i></b>	46.8	57.0

Source: [www.dfes.gov.uk/rsgateway/DB/SFR/s000564](http://www.dfes.gov.uk/rsgateway/DB/SFR/s000564)

### *Causes and policy responses I: gender inequalities*

Awareness of the differential achievements of successive cohorts of girls and boys in schools in England, whether at primary or secondary level, has come very firmly into the public domain within the last fifteen years, and the subsequent ‘moral panic’ has resulted (Epstein et al. 1998; Titus 2004) in the overturning of the discourse

(Weaver-Hightower 2003) and signalling, as in Australia, ‘the endgame for national girls’ educational policies’ (Lingard 2003: 34) in England. The preoccupation with boys’ seemingly lower levels of achievement has ensured that there has been a vigorous debate about the causes of gender differences in achievement. Some explanations have offered misleading directions for policy development in schools. The emphasis on the supposed different learning styles of boys and girls (Smith 1998; Gurian 2001), for example, has failed to acknowledge there is little definitive evidence to support these assertions about gendered learning styles (Coffield et al. 2004; Elwood and Gipps 1999; Francis et al. 2004; Warrington et al. 2006). Other explanations, derived from evolutionary psychology and debates about gendered brain differences (Sommers 2000; Sax 2005), have been challenged by emerging evidence from neuroscientists who suggest that these brain differences, where they exist, do not mean that girls are bound to outperform boys in intellectual abilities (Geake and Cooper 2003; Francis and Skelton 2005), and indeed that the brain itself responds to external stimuli and to social factors (Baron-Cohen 2003). Discussions about the feminisation of schooling, and the need for more male role models particularly in primary schools (Biddulph 1997; TDA 2005), are generally situated within a policy framework which fails to define the nature of the male role models needed (Carrington and Skelton 2003; Mills et al. 2004; Tymms 2005) and ignores the fact that pupils are more concerned with the quality of teachers than with their gender (Warrington et al. 2006).

It is to social constructionist explanations that we need to turn, in our view, if we are to find a firmer basis for policy development. Over the period 2000-4, we worked closely with primary and secondary schools across England on the DfES-sponsored *Raising Boys’ Achievement* Project (Younger et al. 2005b), developing an approach which was both collaborative, working alongside teachers as co-researchers, and inclusive, acknowledging both the diversity of gender constructions and the paramount need to develop responses which neither problematised boys nor excluded girls. Our experiences during the course of those four years, through interviews with pupils and their teachers, through extensive classroom-based observations and in subsequent workshops and conferences, confirmed our belief that sociocultural factors were at the heart of the issue of underachievement by students. This focus on social constructionist perspectives and explanations confirms the findings of other commentators and researchers:

- The impact of the culture of laddishness (Yates 1997; Francis 2000; Warrington et al., 2000) and more recently of ‘ladettishness’ (Jackson 2006), as *some* boys and *some* girls develop defensive behaviours, such as the rejection of academic work and disengaged behaviour to minimise the risk of academic failure.
- Students’ needs to conform to dominant and hegemonic versions of masculinity and femininity in order to belong, to gain group membership and approval (Mac an Ghail 1994; Skelton 2001; Renold 2003; Martino and Pallotta-Chiarolli 2003); such needs frequently result in students adopting attitudes to work and behaviour which are counter to those the school promotes (Rudduck et al. 1996).

- Associated with this, the avoidance of the appearance of engaging in academic work, as *some* boys and *some* girls strive to consolidate their image within the peer group (Epstein et al. 1998).
- The need to avoid difference and not to transgress normal gender boundaries (Frosh et al. 2002); amongst boys, pressures to protect their macho image and assert their heterosexuality by avoidance of anything feminine, including academic work (Salisbury and Jackson 1996; Martino and Pallotta-Chiarolli 2003).
- The low esteem which some students have of themselves as *learners*, based perhaps on their previous schooling experiences and on their resistance to the aims and aspirations of the school (Younger et al. 2005a); this low self-esteem as learners frequently impacts negatively on students' expectations of self, and on academic achievement, when their social self-esteem is rising as they adopt behaviours, achievements and conventions which are often in opposition to those of the school (Skelton 2001).

These closely interrelated factors reinforce the need to explore 'the way in which gender identities are socially constructed in interaction and how children actively construct their gender identities as relational and adopt different behaviours to express these oppositions' (Francis and Skelton 2005: 99). What is clear is that how *some* boys and *some* girls who have high status positions within the local peer group construct their masculinity and femininity, has a crucial impact on their contemporaries; where this construction is oppositional to achievement and to the aspirations of the school, it will impact negatively on attainment, not only of these individuals but of many others within the peer group (Connolly 2004; Renold 2004; Francis and Skelton 2005; Younger et al. 2005; Jackson 2006; Warrington et al. 2006).

Despite the intense focus on identifying the underpinning reasons for the lower achievement levels of boys, there has been little impact at the national scale on the actual gender gap. Although it is crucially important that we celebrate the rising achievements of both boys and girls over the last decade, and recognise that the percentage point difference in the gender gap becomes less significant as achievement rises (Gorard 2000; Younger et al. 2005), we need also to acknowledge the fact that the gender gap has not narrowed, despite the enormous amount of energy, resource and commitment which has been devoted to the issue of 'underachieving boys'.

It is only possible to surmise why this might be the case. At one level, an explanation might be sought in the nature of the strategies which have been put in place in many schools. Considerable emphasis has been placed on short-term strategies: an emphasis on competitive activities, mixed gender pairings in classroom seating, lessons designed around kinaesthetic learning activities, differentiated content in single-sex classes, lessons which are characterised by a clear structure, fast-pace multiple activities which supposedly appeal more readily to boys and can be implemented relatively easily by teachers (Bleach 1998; Noble and Bradford 2000). Thus, a major DfES initiative, the Breakthrough Programme (DfES NPDT 2003), focused upon supporting schools and teachers to make rapid and systematic change to their pedagogic practice, and to evaluate the impact of those

changes upon pupils' attendance, motivation and achievement through a six-week 'Plan, Do, Study, Act' cycle of data collection and analysis. Possible strategies outlined by the Breakthrough Programme included developing curricula that acknowledged the interests of boys, having a Boyszone in school libraries, developing computer facilities which were more accessible to boys and offering explicit and tangible rewards for pupils who met their short-term targets. Similarly, the current DfES website (DfES 2006), responding to the question '*What is the Government doing to address boys' underachievement?*' lists a series of initiatives which include:

- supporting the development of a 'Raising Boys' Achievement toolkit through the National Healthy Schools Campaign (DfES 2003)
- Reading Champions: a nationwide scheme that aims to find and celebrate positive male role models for reading, and which apparently includes many of the nation's leading sportsmen.
- The 'Dads and Sons' campaign encouraging fathers to be more involved in their sons' education.
- Playing for Success, a scheme which uses football and other sports to boost skills and motivation among pupils.
- The development of National Strategies which encompass the setting of 'clear objectives to help boys to see exactly what they have to learn' (National Literacy Strategies), and 'aim to promote fast-paced, lively lessons which use an interactive style and are rich in oral work, (and the use of) texts and topics which will sustain boys' interest and cater for diverse tastes, and (use) role models such as male writers' (Key Stage 3 Strategy).

Much of the debate about intervention strategies is framed, then, within the recuperative masculinity context, offering a 'tips-for-teachers' approach and assuming an essentialist perspective which barely acknowledges the diversity of boys or the existence of girls. There are a number of difficulties with this approach, both principled and pragmatic. As we have indicated, an approach rooted in essentialist beliefs is in itself problematic because it is exclusive, and it marginalises those boys and girls who do not identify with 'the norm'. There is a risk, for example, of disengaging and alienating those boys who do not conform to the stereotype, who do not relate to footballers, who lack a father-presence to be involved in their education (for better or worse!), who prefer reflection and collaboration to immediate response and competition. Equally, from the perspective of a *comprehensive* system of education, this approach is deeply flawed because it minimises the needs of girls, assumes that the teaching of girls is unproblematic and that girls, being more passive, cooperative and undemanding to teach, will engage and achieve whatever the quality of the teaching and the context (Francis 2000). Pragmatically, the approach is flawed because, despite the bold assertions of its protagonists, there is little hard evidence to suggest that the strategies integral to such an approach do impact positively on boys' achievement, or that such approaches can be sustained in the longer term and transferred to other contexts (Warrington et al. 2006). Certainly, there is little data to support the existence of a boy-friendly pedagogy which has the potential to raise boys' achievements *more* than girls. Furthermore, these approaches do little to address the fundamental causes

of underachievement which we have identified, and which are more complex and multi-faceted than strategies based upon recuperative masculinity assume.

Our experiences from the *Raising Boys' Achievement* Project suggest that the gender gap will only narrow as achievement levels rise for most of the cohort, for both girls and boys. Figures 13.5 and 13.6 illustrate this scenario; both schools draw their student intake from challenging catchment areas, with persistent and long-term social and economic deprivation, generational unemployment and low aspirations of education. In both schools, achievement levels were low when a new head-teacher was appointed, conforming to long-established staff and student expectations. In both schools, the initial impact of intervention strategies was uneven, with the gender gap variously widening, disappearing and occasionally even moving in boys' favour, in different years. Ultimately, however, as a result of clearly defined and articulated whole school policies, coherently developed, rigorously monitored and consistently sustained through time, achievement levels have risen to remarkably high levels, and the gender gap has correspondingly narrowed.

Significantly, the actual intervention strategies implemented in both these schools have differed. In the school in North East England (Figure 13.5), the rising levels of achievement have been achieved through the context of a systematic target-setting and mentoring scheme, which has transformed the expectations of students and their parents/carers. Target-setting in such a context has certain fundamental pre-conditions: establishing and monitoring targets which are challenging for students but which also generate a sense of what is possible; establishing time for teachers to engage in professional dialogue about teaching and learning at the level of the individual child; and reviewing and challenging the historic data of the school, within the context of raising expectations and aspirations. Equally, mentoring needs to be a high-intensity activity, involving regular and ongoing dialogue with students and the involvement of senior staff as mentors to give the scheme status and credibility. There needs, too, to be a willingness to accept students' perspectives on their own learning, and an acknowledgement by teachers that mentors act as intermediaries between them and their students. Crucially, though, target-setting and mentoring in this school have been built around a commitment to all students, regardless of gender or ability, and have been conceived within a 'persuasion assertion' context, with mentors engaging in encouragement, persuasion and collaboration with their mentees at one level, but also making demands at another level, suggesting that students have a sense of responsibility not only to themselves but to honour the commitment they are making to their mentor and to their subject teachers. The essence of mentoring here has been to offer to some students a context where they can escape from the needs to conform to a laddish/ladettish image expected by their peers, by deferring to the demands made by the mentor, whilst at the same time developing a 'sense of agency, of having some voice and power to impact on their own contexts and lives, to make decisions and effective choices about their own futures' (Younger et al. 2005: 114).

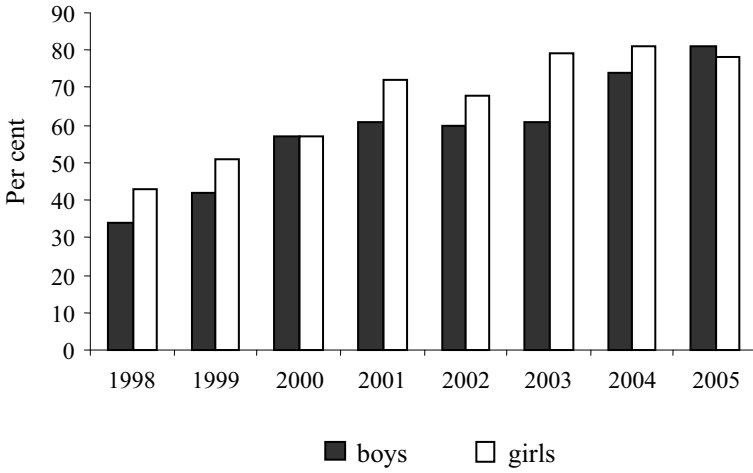


Figure 13.5: Percentage of Pupils Achieving Five or more A\*-C GCSE Grades or their Equivalent (school A, North East England)



Figure 13.6: Percentage of Pupils Achieving Five or more A\*-C GCSE Grades or their Equivalent (school B, inner Manchester)

The inner Manchester school (Figure 13.6) similarly reflects a transformation of achievement over the last decade, achieved within the context of a stable catchment area. Here, though, the focus of the interventions has been around sociocultural initiatives which have challenged anti-learning cultures within the school and developed an ethos which has helped to eradicate the initial 'it's not cool to learn' attitudes which were held by students. In the words of the school's head-teacher, these sociocultural strategies attempted 'to reframe the students' view of school so that academic success is valued, aspired to and seen to be attainable'. Crucial to addressing peer group image and expectation here was the identification of key leaders within each year group, those students who established the tone of the year group and who were particularly influential in setting images of masculinity and femininity which were acceptable for other students. Such key leaders, once identified, were each allocated a 'key befriender', a member of staff who was thought to have a good, credible relationship with that student, to offer support, proactive intervention and encouragement, to attempt to bring the students 'on-side', working with, rather than against, the culture and aspirations the school was attempting to establish. Central to the scheme was the notion that if key leaders could be tied into the culture of the school, their 'followers' within the student community would indeed follow. Evaluations of the scheme, in terms of its impact on students' attendance, behaviour, motivation and achievement, suggest that the role of the key befriender is 'the key to the success of the strategy, helping to promote and support students' aspirations while also striving to establish role models which were not physical or stereotypical' (Younger et al. 2005: 144).

What is clear from our experiences working with the intervention strategies developed in these two schools, however, is that such approaches cannot be *simply* transferred to other schools. A series of pre-conditions needs to be in place before such strategies will impact positively upon achievement: the establishment of an achievement culture within the school which embraces all students; a visible and credible commitment from the school principal and the senior management team to publicly support, promote and sustain the initiative; teachers who see it as their responsibility to raise students' expectations, to develop students' self-belief and self-esteem as learners, and to promote learning rather than simply manage behaviour; the development of a teaching and learning approach within the school which makes lessons accessible and worthwhile for all students. Where these pre-conditions have been addressed, the intervention strategies described above have begun to impact positively on the achievement levels of boys and girls; equally, however, our experiences suggest that where some students and staff do not identify with this sense of what is possible, then the strategy will be less effective.

This brief discussion of the strategies which have been effective in two different schools both in raising achievement of boys and girls and in narrowing the gender gap suggest that intervention strategies need to be more wide-ranging and different in character to many which have been developed within the context of recuperative masculinity. In both primary schools (Warrington et al. 2006) and in secondary schools (Younger et al. 2005), the most effective and potentially transformative strategies are those which develop interventions within a gender inclusive and gender-relational context, incorporating notions of difference and agency, and



placing the emphasis on boys *and* girls. Such an approach explicitly values individuals without stereotyping, develops an holistic approach which integrates pedagogic, organisational and sociocultural factors, balances self-responsibility and assertiveness, and addresses issues of laddish behaviour without problematising all boys (Mills 2003). These approaches involve a more nuanced and multi-faceted response to a complex issue; as yet, such responses are evident only in a small number of schools in England, but where they are in place, the impact on aspirations and achievement has been transformative.

*Causes and policy responses II: gender inequalities within social class and ethnic groups*

The current and persistent inequalities in educational achievement between boys and girls are not simply a matter of gender, however. Indeed, as we noted earlier, the evidence suggests that factors of social class and ethnicity are much more prominent than that of gender in any explanatory framework of inequality (Demack et al. 2000; Gillborn and Mirza 2000; Phoenix 2001). Connolly (2006: 14-15) makes this point with clarity, on the basis of an analysis of the Youth Cohort Study of England and Wales:

While girls have been about one and a half times more likely to gain five or more GCSEs A\*-C than boys, those from the highest social backgrounds have been between five and nine times more likely than those from the lowest social backgrounds. Similarly, those from the top achieving ethnic group (Chinese) have been between four and seven times more likely to achieve at least five higher grade GCSE passes than those in the lowest achieving group (Black).

This impact of social class (Hargreaves 1967; Lacey 1970; Willis 1977) and ethnicity (Sewell 1997; Youdell 2003; Archer and Francis 2005; Francis and Archer 2005; Crozier 2005) on achievement has been long documented, and the persistence of the continuing patterns of inequality, with its stark spatial component (Gulson 2005; Warrington 2005) has prompted a series of measures which have attempted to address the issues of educational disadvantage and exclusion within socially deprived communities. Hence, at the macro level, since coming to power in 1997, New Labour initiated a series of interventions designed to raise the quality of educational achievement and provision in these targeted areas. Over 70 Education Action Zones (EAZs) were established between 1998 and 2000, 'designed to raise standards in disadvantaged areas by innovative means and formally run by local partnerships representing businesses, voluntary associations, the local social community and the schools' (Gewirtz et al. 2005: 651). The Excellence in Cities (EiC) initiative followed, launched in 1999 to 'redress educational disadvantage and under-performance in schools located within the most deprived urban areas of England' (Morris and Rutt 2005). Throughout, the City Technology Colleges initiative (a policy first introduced in 1987 by a previous Conservative administration) continued to thrive and expand, and to offer a model for the Academies, introduced as a policy initiative in 2000 and independent of local government control and accountability. These initiatives towards transforming standards, offering greater choice and 'market options' to parents and giving increased flexibility and autonomy to schools, have reached their peak as we write,

with the publication of the Labour government's White Paper on education, *Higher Standards, Better Schools for All* (DfES 2005).

It is beyond the scope of this paper to analyse the rationale and wider impact of these various initiatives on the communities in which they are located. What is significant however, is the extent to which this raft of policy initiatives, dating from 1987 in the case of the forerunners of the specialist schools, has been developed on an unsure evidential base in terms of the actual impact of raising students' achievements. The evidence on Education Action Zones, for example, suggests that the policy impact was limited and inconsistent, with some instances of innovation and attitudinal change, but few consistent improvements in pupil performances or embedded changes in pedagogy (Halpin et al. 2004; Power et al. 2003). Evaluations of the impact of Excellence in Cities on the quality of schooling available in disadvantaged areas are more ambivalent, with Ofsted<sup>126</sup> claiming that 'the proportion of pupils in EiC partnership schools achieving five or more A\*-C GCSE grades or their equivalent has increased by 5.2 percentage points over the last 3 years, narrowing the gap to other schools from 10.4 percentage points to 7.8 percentage points' (Ofsted 2005a), and conversely, an NFER<sup>127</sup> report, conducted on behalf of DfES<sup>128</sup>, concluding that 'the most disadvantaged group of pupils (those in receipt of free school meals) do not appear to have been affected significantly. It would appear that EiC, as a whole, has not yet been successful in overcoming existing barriers to learning or surmounting the influences of background characteristics' (Morris and Rutt 2005: 38).

In contrast to both EAZs and EiCs initiatives, the specialist school programme (SSP) was more wide-ranging, accessible in theory at least to any school wherever its location, as long as the school could identify £50,000 initial investment from private sources. Here again, though, the evidence to support this view of the transformational capacity of specialist schools is ambiguous. On the one hand, the Specialist Schools Trust claimed, on the basis of its own sponsored research (Jesson 2002), that 'on a value-added basis, non-selective specialist schools continued to score significantly better results than other comprehensives, with 57 per cent of students gaining 5 or more good GCSEs in 2004' (Taylor 2005: 1), and Ofsted (2005b) reported that, compared with other schools, 'specialist schools do well against a range of indicators, particularly identifying improving leadership and management, and standards of achievement which are higher and improving at a faster rate' (Ofsted 2005b: 3). Other commentators, however, have raised doubts about the value-added methodology used by Jesson, (Gorard and Taylor 2001; Schagen and Goldstein 2002), and both Schagen and Schagen (2003) and Ofsted

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126 Ofsted, the Office for Standards in Education, is the government agency in the United Kingdom which regularly inspects the standards of teaching, curriculum provision and achievement in schools. The lowest assessed level given to schools is that of 'special measures', when the school is required to put in place an action plan which immediately addresses the shortcomings identified by the Ofsted inspectors, and is subsequently re-inspected on a regular and frequent basis.

127 NFER: The National Foundation for Educational Research.

128 DfES; The Department for Education and Skills has responsibility for state education in England.

(2005b) agree that there are significant variations in performances across the different types of specialisation and between schools.

What is most surprising, perhaps, in this review, is that the evidence of increased student achievement within specialist schools is as ambivalent as it seems to be. After all, specialist schools receive additional funding and are able to invest in additional resources and facilities; capital investment frequently allows new building or refurbishment which can impact positively upon staff and students' morale; promotional and marketing campaigns can portray such schools as more attractive to more affluent and mobile parents; notions of free choice enables specialist schools to recruit from a wider area. Gorard and Taylor conclude, for example, that 'schools that are specialist tend to increase the socioeconomic segregation of school intakes and attract the more able and socially advantaged children' (Gorard and Taylor 2001: 380). In such a context, it would be astonishing if specialist schools did *not* significantly outperform their non-specialist neighbours<sup>129</sup>.

It is evident from this review of policy at the macro-level that there is little definitive evidence to suggest that New Labour's focus on the privatisation and marketisation of education (Harris and Ranson 2005; Thrupp and Tomlinson 2005) has achieved increased equity and social mobility for students in schools in disadvantaged areas. Despite its attempts to offer increased choice to parents and to improve the quality of schooling, it remains the case that 'equality of educational provision is still far from a reality' (Lupton 2005: 590). Despite the educational reforms that have taken place at the macro level, and despite the specific targeting of poor neighbourhoods by particular initiatives, school quality remains correlated with area deprivation scores and gender inequalities within social class, and some ethnic group differences remain as intransigent as ever.

### *Gender equality: the elusive goal?*

These policies developed in England over the last two decades have attempted to address educational inequalities at different scales. In the case of equal opportunities for girls and more recent concerns with raising boys' achievements, the spotlight has fallen on schools at the micro level, at whole-school policies and pedagogic practices linked to school improvement and increasing effectiveness. In the case of inequalities which, besides having a marked gender dimension also reflect social class and ethnicity, there have also been welcome interventions aimed at resolving the particular problems of deprived communities. Such initiatives have, however, been within a context of increasing marketisation and competition between schools, and whilst the rhetoric of choice is persuasive, there is accumulating evidence to show a growing segregation of schooling as the middle classes are able to mobilise

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129 The first Academies have been in existence for only a very short time, so any detailed analysis of their impact is premature. On the limited evidence available, however, there is little to suggest that Academies deliver educational outcomes for disadvantaged students superior to the schools they replaced (Gorard, 2005). Furthermore, one of the first three Academies inspected by Ofsted was placed in 'Special Measures', and in the school league tables published in January 2006, half of the flagship Academies were named among the worst-performing schools in England.

their material and cultural resources to get the best education for their children. Middle-class parents use the sphere of education to sustain advantages for their children and so act to maintain and reinforce social class divisions and inequalities, because the successful choice of some parents is balanced by the increasingly unsuccessful choice of others, with working-class families being disadvantaged in the competition for school places because they lack the necessary economic, social and cultural capital to compete successfully (Brown 1990; Vincent 2001; Ball 2003; Warrington 2005).

As we have suggested, policy initiatives in relation to gender need to be treated with caution. Although boys do tend to perform less well than girls within social classes and ethnic groups, it is simplistic to assume that some girls do not underachieve or do not continue to experience discrimination in their schooling. Similarly, it is simplistic to assume that structural change and a competitive market-based system can reduce inequality, improve social justice for the most disadvantaged groups, and thereby lead to higher levels of educational achievement for both girls and boys.

Inevitably, high levels of poverty exert downward pressures on the quality of educational provision, and provide a whole series of unpredictable events which detract from teaching and learning, place additional stresses on teachers and students, and impact negatively on the school's capacity for improvement (Lupton 2005). Yet it is too simplistic to argue that the relative performances of schools are simply a matter of geography and location for it is clear that schools with similar intakes do not promote the progress of their pupils at the same rates (National Commission on Education 1996). Indeed, a central thesis of the school improvement and school effectiveness movements is that all schools have the potential to improve and that there are certain internal conditions conducive to raising performance (Harris 2002; Reynolds et al. 2004; Harris and Ranson 2005).

Our own direct experiences in the Raising Boys' Achievement Project, working with schools in inner city areas of London, Birmingham and Manchester, suggested that comprehensive schools in such areas can thrive and make a difference, raising expectations and aspirations within the community, valuing the social capital parents bring (Warrington 2005), and transforming students' opportunities. Such schools reiterated a commitment to process as well as to educational outcomes, and placed high value on quality relationships within the school and its community (Warrington et al. 2006). These schools developed holistic, coherent policies within a gender-relational context, policies which engaged students and staff alike, and impacted positively upon the motivation, engagement and achievement of 'underachieving' boys and girls.

It is self-evident, though, that gender is not the only variable. The juxtaposition of ethnicity, social class and gender means that there is no one form of masculinity or femininity, but rather a multiplicity of interpretations which requires a diversity of response. In England in the first decade of this new century, the challenge remains to address and reduce educational inequality, in whatever scale or context, by developing policies which will be appropriate to local circumstances and needs, and place the emphasis on inclusiveness rather than on an essentialist and simplistic focus on 'boys' or 'girls' per se. Contextualisation within the local is paramount

because there is *no* programme which will ensure rapid, systematic and sustainable improvements regardless of local need and particularity; the search for the universal panacea remains as elusive as ever.

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## The Australian Experience

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## INTRODUCTION

In the literature on educational inequality, differences between rural and urban locations receive little attention. Yet, in many systems, inequalities of place are both persistent and powerful. For example, in a recent study using Programme for International Student Assessment (PISA) 2000 data, Williams (2005) examined cross-national variation in rural mathematics achievement among 15-year-olds in 24 industrialised nations. He found that in 14 of the 24 countries mathematics scores for students in rural schools were significantly lower than scores for students attending schools in urban and medium-size communities. Similarly, a study in Canada using results from PISA found that students from urban schools performed significantly better in reading than students from rural schools (Cartwright and Allen 2002). The results could not be explained by population differences linked to socioeconomic backgrounds. Patterns for Australia are similar showing that fifteen-year-old students in remote areas of Australia are not achieving in reading and mathematics at the same level as their city counterparts, even after taking account of population differences (Cresswell and Underwood 2004). The same is true for other educational outcomes, such as school retention, patterns of attendance and entry to higher education. What accounts for these patterns and why do they persist? Have they changed over time? What can be done to address them?

The Australian experience is used in this chapter to address these questions by discussing the differences between urban, regional and remote locations, and how these differences impact on educational opportunities and outcomes, including post-school transitions. The chapter will examine what has been learned about rural disadvantage, what are some of its causes, and offers examples of recent policies and strategies that have been introduced to reduce rural disadvantage.

## RURALITY IN THE AUSTRALIAN CONTEXT

Australia is a large continent (similar in size to the United States) with a relatively small population (approximately 20 million). It is highly urbanised, with three quarters of Australians living in urban areas with a population greater than 100,000 (ABS, 2006). All of Australia's largest cities, and the bulk of its population, are

located on the eastern and southern coastal fringes. This pattern of settlement impacts on access to a range of services, including education and training.

Recent population growth patterns have maintained these settlement patterns. The majority of Australia's population growth has occurred in the capital cities, particularly in the inner city areas, and to a lesser extent, on the urban fringes, while some areas of Australia have experienced significant population decline. Some of the decline has occurred in established suburbs within capital cities and major urban centres, but the fastest population decline has occurred in rural areas, and most of this decline has been caused by net migration loss (ABS 2006). Immigration patterns continue to add to these disparities, with new migrants still preferring overwhelmingly to settle in Australia's larger, diverse and more well-developed cities (Welch 2006).

A definition of rurality that separates Australia into urban and non-urban localities carries the risk of homogenising rural and remote Australia, as well as the danger of constructing non-urban locations as inherently deficient and marginal (Moriarty et al. 2003). In recognition of such diversity, the Australian Bureau of Statistics has developed a composite index of geographic location that includes a concept of remoteness, the Accessibility/Remoteness Index of Australia (ARIA). ARIA is an index which measures remoteness based on the road distance to the nearest town (urban centre) in each of five population size classes. For example, any location within a short distance of an urban centre of more than 250,000 persons belongs to the "Major Cities" class. The population size of the urban centre is used as a proxy for the availability of a range of goods and services, and opportunities for social interaction. It is a geographical concept and does not attempt to define the broader concept of accessibility which is influenced by many factors such as socioeconomic status or mobility.

The five ARIA categories, and the proportion of Australia's population that they contain, are as follows: Major Cities (66.2 per cent), Inner Regional (21.0 per cent), Outer Regional (10.2 per cent), Remote (1.6 per cent) and Very Remote (0.9 per cent) (Bureau of Transport and Regional Economics, 2005). This remoteness structure ranges from Highly Accessible (unrestricted access to a wide range of goods and services), to Very Remote (little access to goods and services, or opportunities for social interaction).

This definition of remoteness still contains the danger of glossing over the diversity and variety of rural areas within Australia. As Alloway et al. (2004) and Kenyon et al. (2001) have noted, the diversity of rural Australia is quite significant. For example, rural Australia varies across farming areas, agricultural and pastoral service centres, mining towns (both booming and declining), coastal resorts, remote indigenous communities, isolated islands, alternative communities, wilderness and desert areas, and major regional centres. This diversity is reflected in regional differences in household incomes and unemployment rates. However, on the average, country areas tend to have household incomes that are below the national average (Productivity Commission 1999).

A product of this diversity is variation in patterns of economic stability. For some time there has been decline in the contribution of agriculture to national economic output and at the same time growth in other sectors of activity, such as

mining, tourism and service occupations. Where once Australia proudly boasted that it 'rode on the sheep's back', the agricultural industry now contributes a much lower proportion of the gross national income. As in other OECD economies, the major growth in Australian employment of recent years has been in the services sector. This sector now accounts for 70 per cent of Australian jobs, but is heavily concentrated in our major capital cities. Exacerbating this concentration is the fact that tens of thousands of service sector jobs have been stripped from rural communities over the past two decades, largely by state and federal governments, in pursuit of 'small government' (Alston 2004) and around two decades of what is termed in Australia 'economic rationalism' (Pusey 1991). This process, that broadly parallels what is generally called neo-liberal structural adjustment elsewhere, has seen key services such as banking, health, education and training lost from many rural communities.

Moreover, advances in agricultural technology also now mean that it is possible to farm large areas with far fewer workers, while another rural staple, mining, is also becoming less labour-intensive than previously. Combined with the relative lack of employment and training opportunities in country areas (Alston & Kent 2001; Alston 2004), and the ongoing effects of the rural recession and drought, this has led to the further depletion of the rural populace, out-migration of young people, and the greying of rural communities. Indeed, while Australia's population as a whole is ageing, non-urban populations are ageing faster than urban populations. In 1989, the median ages of Australia's urban and non-urban populations were similar, at 32.0 years and 31.5 years respectively. By 2004, non-urban Australia had a higher median age (38.3 years) than urban Australia (35.8 years) (ABS 2006).

## DIMENSIONS OF RURAL EDUCATIONAL INEQUALITY

Estimates are that between one quarter and one third of the approximately 1.8 million Australian elementary school students and 1.3 million secondary students, attend schools in rural or remote areas (Human Rights and Equal Opportunity Commission 2000). It is important to consider whether or not the progress and outcomes of the large numbers of students attending schools in rural and remote areas differ from those of students attending urban schools. This section will focus on the geographical dimensions of differences in educational attainment, achievement, and transitions to post-school destinations.

### *Attainment*

School location is linked to whether or not young people remain to the final years of school. Young people living in rural parts of Australia have lower rates of participation compared to their urban counterparts, though there have been substantial improvements for all young people in Australia. Over the last thirty years, the proportion of young people remaining until Year 12 has more than trebled, reaching 75.7 per cent in 2004 (ABS 2005). The increase has been generally consistent for both metropolitan and non-metropolitan students. However, gaps still persist. For example, analysis of participation in Year 12, using

longitudinal survey data of a national cohort of students selected when they were in Year 9 in 1998, showed that the numbers remaining at school to Year 12 in 2001 for metropolitan students was 9 percentage points more than that for non-metropolitan students (Marks et al 2000). The rates of participation in non-metropolitan areas varied according to population size. Participation in Year 12 for students in remote areas (less than 1,000 persons) was 69 per cent, compared with 73 per cent in regional areas (between 1,000 and 99,999 persons) and 82 per cent in metropolitan centres (greater than 100,000 persons) (Marks et al 2000).

Retention to Year 12 varies across regions by gender. Rural and remote students are less likely to stay on at school after the compulsory years or to finish secondary school, but the gap is different for boys compared to girls. The average Year 12 retention rate for boys in metropolitan areas in 2000 was 11 percentage points less than for girls, whereas the rate for boys in rural and remote areas was 17 percentage points less than for their female counterparts (Human Rights and Equal Opportunity Commission 2000).

In New South Wales, the state with largest government school system in Australia, rates of retention vary markedly by region. For students in government schools, retention from Year 7 to Year 12 in New South Wales reduces substantially with increasing distance from major cities (see Figure 14.1). In 2004, the rate was 71.9 per cent, on average, for students attending schools located in metropolitan areas (those classified as “major city” using the ARIA classification scheme). For students living in inner or outer regional areas, the rates were about 20 points lower: 51.7 per cent and 48.2 per cent, respectively. For students in the most isolated or remote areas, the rate was over 40 points below the rate for students in major cities. The majority of young people living in remote areas of New South Wales do not remain at school to Year 12. Results from regression analysis revealed that the low school completion rates in remote schools are significantly different from the mean for the state even when socioeconomic differences, concentrations of indigenous enrolments and school size are taken into account. The findings indicate that population characteristics alone cannot explain the differences in retention.

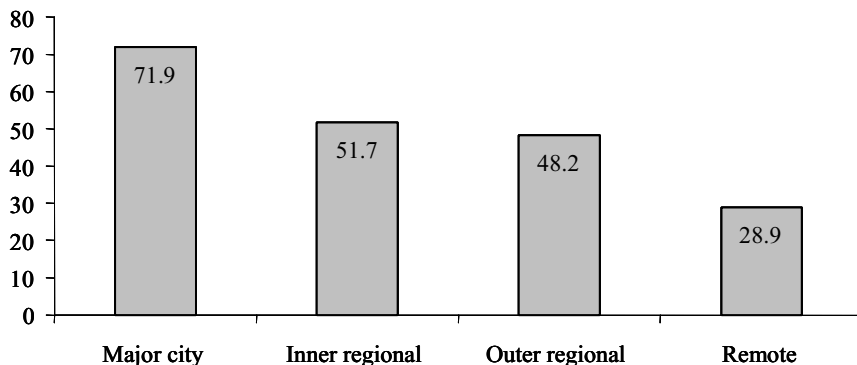


Figure 14.1: Year 7-12 Retention Rates for students in Government Schools, by Region: New South Wales, 2004 (%)

Source: Derived from data provided by the New South Wales Department of Education.

These patterns are consistent with other Australian states and territories. A study of the destinations of school leavers in Victoria found that early school leavers are drawn disproportionately from non-metropolitan locations: whereas 27.3 per cent of all Year 12 completers in 2005 were located in non-metropolitan regions of Victoria, 41.8 per cent of all early school leavers were from these regions, patterns consistent with previous research (Teese 2001; Helme & Polesel 2004). In the Northern Territory, rates of leaving school before completing Year 12 are particularly high, with only about 23 per cent of boys in rural and remote communities and 25 per cent of girls staying on to Year 12 (Human Rights and Equal Opportunity Commission 2000).

### *Achievement*

Achievement gaps between rural and urban areas in Australia have been reported in a range of studies. Williams (2005), for example, reported in his study of cross-national differences in mathematics achievement that in Australia there was a linear relationship between community size and average mathematics score: the larger the community, the higher, on average, the score. An analysis of the 2003 PISA data of 12,000 Australian students showed that in mathematical and scientific literacy, students in metropolitan schools outperformed those in provincial schools, who in turn had a higher mean achievement than students in remote areas (Thomson et al. 2004). The differences between regions were statistically significant, with the performance of students in remote locations below the OECD average while that of students in metropolitan areas was more than one half of a standard deviation above it (Thomson et al. 2004).

Annual national benchmark data on literacy and numeracy reported by the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) showed that in 2004 the percentages of Year 3, 5 and 7 students achieving the benchmarks (agreed minimum acceptable standards) declined with remoteness of school location (MCEETYA 2005). The percentage of students reaching the benchmark in numeracy in Year 7 fell from 83.4 per cent in metropolitan locations, to 80.2 per cent in provincial, 73.3 per cent in remote areas and to only 50.8 per cent in very remote communities. These sorts of differences occur at all year levels and in both literacy and numeracy. There is some suggestion that the gaps get bigger across the year levels, that is, that achievement gaps between urban and rural and isolated communities grow as young people ascend school (MCEETYA 2005).

Table 14.1: Mean Scores in Literacy and Numeracy Achievement, by Region: Primary and Secondary Schools in NSW, 2004.

	Year 3		Year 5		Year 7	
	Literacy	Numeracy	Literacy	Numeracy	Literacy	Numeracy
<i>Major city</i>	50.8	53.0	57.6	60.5	88.7	85.9
<i>Inner regional</i>	49.6	52.1	56.5	59.2	87.4*	84.0*
<i>Outer regional</i>	49.5	51.8	55.9	58.9	87.1*	83.8*
<i>Remote</i>	48.2*	51.2*	54.2	57.0*	82.3*	78.0*
<i>Mean</i>	50.3	52.6	57.1	59.9	87.9	84.8
<i>SD</i>	2.8	3.4	2.7	3.6	3.6	5.0

\* = Significantly different after controlling for differences in SES, density of indigenous students and enrolments size in an Ordinary Least Squares regression.

Source: New South Wales Department of Education and Training (unpublished data)

State-level data also reveal gaps between schools in rural and urban areas. Table 14.1 shows mean scores in literacy and numeracy achievement for Years 3, 5 and 7 in government schools in New South Wales. Performance declines with degree of remoteness, and the gap between major city and remote students tends to increase with each year level, suggesting that the effects of educational disadvantage associated with remoteness increase as students progress through school. In literacy, for example, students in remote schools in year 3 achieve at a mean rate about one standard deviation below their counterparts in major city schools. In Year 7, the gap is about 1.8 standard deviations. In numeracy the gap is about one half of one standard deviation in Year 3, but over 1.5 standard deviations in Year 7.

Some or all of this variation may be due to population differences between urban and rural communities, such as differences in educational attainment levels, socio-economic status and the concentration of indigenous families. However, significant differences remain between achievement levels in major city schools and schools in remote locations after controlling for differences in SES, concentration of indigenous enrolments and school size. In Year 7, it is not only schools in remote locations, but compared against major city schools significantly lower achievement in literacy and numeracy was recorded in inner and outer regional schools as well as those in remote areas.

### *Post-school transitions*

The differences in achievement and retention outlined above have major implications for post-school pathways. Lower levels of achievement and school completion for students in rural and isolated communities translate into lower rates of transition into further education and training. Overall, young people from rural,



and especially remote, communities are under-represented in higher education, while they also form a disproportionately high number of those who do not enter any form of education and training after leaving school (Ainley & McKenzie 1999; Lamb, Dwyer and Wyn 2000; HREOC 2000).

The Australian higher education system has expanded rapidly in the last two decades, at a rate that is one of the highest among developed countries. Part of this growth is a huge increase in the numbers of international students (a seven-fold increase in 14 years) but domestic growth has also been considerable, bringing Australia towards the top end of developed countries in terms of participation (Lamb, Long & Baldwin 2004). This growth has also been reflected in the rates of participation for young people from rural and remote areas, though participation remains much lower than that for the city-based population. The number of non-urban students enrolled in higher education increased by 23.3 per cent over the decade from 1992 to 2001, but the proportion of all domestic students who were from non-urban areas remained unchanged (DEST 2003). In 2001, rural students comprised about 24.3 per cent of the Australian population, but they represented only 17.7 per cent of those in university. Approximately 4.5 per cent of young people in Australia live in more remote areas, but they made up only 0.9 per cent of university students.

Destination surveys of school leavers portray a similar picture. Recent large scale surveys of school completers in Victoria and Queensland (involving over 60 per cent of all Year 12 leavers) indicate weaker transition to university for school completers from non-metropolitan areas. Table 14.2 presents the main destinations of school leavers in the first year after leaving school. It shows that in Victoria approximately one third (33.7 per cent) of Year 12 leavers from rural and remote areas were studying at university, a rate almost 13 percentage points below that for leavers who had attended city schools (46.6 per cent). In Queensland, the gap was about 8 percentage points in favour of city-based school leavers. Access to higher education remains an issue for young people living in rural parts of Australia.

Participation in vocational education and training (mainly delivered in Technical and Further Education institutes), is also lower for students who attended schools in rural and remote areas. Whereas 25.4 per cent of Victorian city-based school leavers participated in VET in the year after leaving school, only 18.2 per cent of rural and remote students did. A similar gap exists in Queensland. It indicates that transition to tertiary education is an ongoing issue as a form of disadvantage for rural and remote populations.

Table 14.2: Destinations of Year 12 Completers, by Region:  
Victoria and Queensland, 2005 (%)

Destination	Victoria		Queensland	
	City	Rural and remote	City	Rural and remote
<i>University</i>	46.6	33.7	39.2	31.0
<i>TAFE/VET</i>	25.4	18.2	16.6	11.0
<i>Apprentice/Trainee</i>	8.1	15.2	13.1	22.2
<i>Employed</i>	11.5	17.7	24.5	28.9
<i>Unemployed/NILF</i>	3.4	4.6	6.5	6.9
Total	100.0	100.0	100.0	100.0

Source: Centre for Post-compulsory Education and Lifelong Learning, University of Melbourne (unpublished data)

Other forms of vocational education and training are far more popular and important for non-city students. Apprenticeships and traineeships, which combine work and study in structured programs that provide training and qualifications in skilled trades and related occupations, are an important source of post-school education and training in the pathways of young people living in rural and remote areas. Over 22 per cent of all Year 12 leavers in non-city areas of Queensland in 2005 had gained an apprenticeship or traineeship. The rate for city-based leavers was 13.1 per cent. A similar gap exists in Victoria where 15.2 per cent of non-city school leavers took up an apprenticeship or traineeship as against 8.1 per cent of city-based leavers.

Vocational education and training is important in the pathways from school to work for young people in rural and remote areas. With lower levels of school achievement and higher levels of early school leaving, VET is a major source of further education and training for school leavers in non-city areas and plays a pivotal role as an avenue for second-chance (or recovery) education. This is evident in looking at the patterns of participation for 15-24 year-olds. These are displayed in Table 14.3. They show that rates of participation in VET are higher for those living in regional and remote areas. This is particularly the case for training in 'entry' or 'basic' level VET and for middle-level VET, which are both levels of education and training less reliant on Year 12 completion and high levels of achievement for access. Participation rates for diploma level VET are lower in regional and remote areas because entry to this level of VET is regulated more often by Year 12 completion and higher levels of school achievement.

Table 14.3: Participation in VET, by Remoteness and Type of VET: 15-24 year-olds, Australia, 2004

	Basic VET	Middle-Level	Diploma -Level	All VET		
				Accredited VET	Non-award	Any VET
<i>Major city</i>	4.9	9.4	3.2	16.4	4.2	19.4
<i>Inner regional</i>	10.0	12.4	1.8	22.6	7.0	27.9
<i>Outer regional</i>	10.3	11.8	1.1	21.6	7.6	27.0
<i>Remote</i>	12.3	11.5	0.8	23.0	7.5	27.9
<i>Very remote</i>	11.1	7.2	0.4	17.6	5.7	21.2
<i>Australia</i>	6.5	10.2	2.7	18.1	5.1	21.8

Source: 2004 AVETMISS Data Collection (unpublished)

## FACTORS CONTRIBUTING TO RURAL DISADVANTAGE

The differences in attainment, achievement and post-school transitions show that living in rural and isolated areas can be a source of educational disadvantage. It leads to the important question about the factors that help drive the different patterns — what are the characteristics of rural populations, schools and communities that can help explain the consistent patterns?

### *Family and community background*

A key issue in research on the role of remoteness as a source of disadvantage is the relationship between regional context and socioeconomic disadvantage. Lower levels of participation in post-compulsory schooling and lower achievement levels in rural and remote areas are, to some extent at least, due to the SES profiles of more isolated communities. Recent studies suggest that the gap between urban and rural and remote students is less influenced by the effects of geographic isolation and more influenced by other associated characteristics such as low socioeconomic status (see, for example, Jones 2002). It is the case that the populations in rural and remote areas have lower levels of educational attainment and while most people who are disadvantaged in the form of low socioeconomic status reside in major urban centres, they tend to be over-represented in smaller towns and in geographically isolated communities (Australian Bureau of Statistics 2000).

Parents in rural areas across Australia have lower levels of educational attainment, at least based on population profiles. Table 14.4 shows that while almost 20 per cent of the population of 15 – 64 year-olds in major city areas has attained a university degree, this is true for only about 10 per cent of the population in outer regional, remote and very remote locations. Rural and remote populations have higher proportions of residents who have attained only basic vocational qualifications or not attained any post-school qualifications. City-based residents are

also more likely to earn higher level VET qualifications such as diplomas and advanced diplomas.

Table 14.4: Educational Attainment by Remoteness: Population 15 Years and Over, 2001 (%)

	Bachelor Degree or higher	Diploma or Advanced Diploma	Skilled vocational Certificate III or IV	Basic vocational, or school only	Total
<i>Major Cities</i>	19.9	8.6	16.3	55.3	100.0
<i>Inner Regional</i>	12.2	7.4	20.7	59.7	100.0
<i>Outer Regional</i>	10.6	6.6	20.1	62.7	100.0
<i>Remote</i>	10.3	6.1	19.6	63.9	100.0
<i>Very Remote</i>	9.9	5.8	17.6	66.8	100.0

Source: Bureau of Regional and Transport Economics (unpublished data)

Rural and remote communities also have higher concentrations of indigenous families. One of the strongest relationships between success at school and student background is that linked to indigenous status. For example, at a national level, the apparent retention rate to Year 12 for non-indigenous Australians was 76.8 per cent in 2004, but for Indigenous students the rate was 39.5 per cent, about half the rate achieved by other Australians. Indigenous students form one of the most educationally disadvantaged populations in the Australian community. Figure 14.2 shows that the highest concentrations of indigenous students are in rural and remote areas. While approximately 1 in every 36 students in a major city government school in New South Wales is indigenous, the number is 1 in every 12 in inner regional schools, 1 in every 7 students in schools located in outer-regional areas, and more than 1 in every 3 in schools in remote areas.

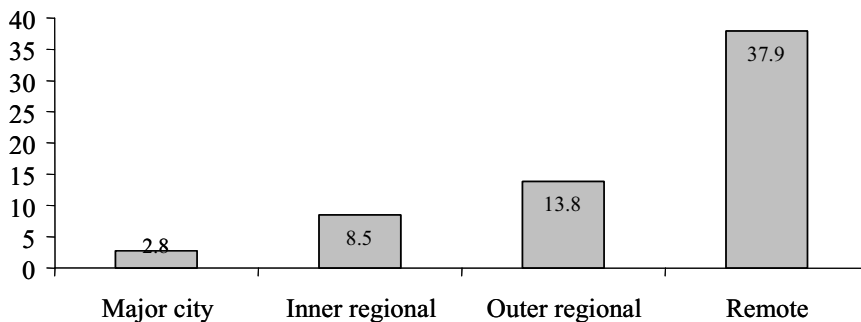


Figure 14.2: Concentrations of Indigenous Students, by Region: Government Schools, New South Wales, 2004 (%)

Source: New South Wales Department of Education and Training (unpublished data)

*School characteristics*

Notwithstanding decades of consolidation, many rural schools are small. For example, a recent inquiry revealed that in Queensland there were one hundred and twenty-one government schools in rural and remote areas with fewer than twenty pupils, while South Australia had thirty-four schools with fewer than forty enrolments. Table 14.5 shows that in New South Wales the mean enrolment in 2004 for primary schools in major cities was 321. This was more than double the rate for primary schools in inner regional (155) and outer regional (120) areas. It was more than four times the average size of primary schools in remote communities (69).

*Table 14.5: Characteristics of Schools in New South Wales, by Region: 2004*

	Mean enrolments 2004	Indigenous students (%)	SES
		Primary schools	
<i>Major city</i>	321	3.6	1002.8
<i>Inner regional</i>	155	8.2	969.6
<i>Outer regional</i>	120	11.9	980.2
<i>Remote</i>	69	17.3	948.9
			Mean=1000 SD=63.4
		Secondary schools	
<i>Major city</i>	807	2.6	1000.9
<i>Inner regional</i>	612	7.1	962.7
<i>Outer regional</i>	429	13.0	962.8
<i>Remote</i>	215	39.3	930.4
			Mean=990 SD=66.5

Source: New South Wales Department of Education and Training (unpublished data)

Size is a major source of disadvantage for rural and remote schools. Challenges posed by size, declining enrolment and geographic location put rural schools at an economic and educational disadvantage, making it difficult to generate funding, recruit and retain teachers, offer an extensive range of programs in the post-compulsory years and maintain school facilities. As schools contract in size, they lose resource flexibility, their program options are more limited, and their capacity to supplement government income with locally-raised funds also declines. The tendency for schools in rural and remote areas to be smaller in size exerts increased resource pressures on such schools in pursuing the same educational goals as schools in city areas. Program and curriculum breadth are major issues. Small student numbers have significant implications for the range of subjects schools can offer, and thus their ability to accommodate student diversity. Even at primary school level smaller numbers of enrolments place pressure on the capacity of schools to provide specialist programs and cover all of the key learning areas in the same depth. This is compounded by the distance from other schools. Whereas in major city areas it is often possible for smaller schools to work together in program

design and delivery because of close proximity, this is often much harder for schools in isolated areas.

Small enrolments are often coupled with other features of disadvantage. Table 14.5 shows that regional and remote schools are more likely, on average, to have larger proportions of indigenous students than schools in major cities. In remote areas, the concentrations of indigenous students can be very high. Indigenous students are more likely than non-indigenous students to experience multiple forms of disadvantage, which create extra challenges for these students, and for teachers and schools in these locations (see Helme, this volume). As well as indigenous students, schools in rural and isolated areas also have higher concentrations of students from low SES backgrounds. The interaction with social disadvantage, involving not least the greater resource and program effort required to meet the educational needs of higher concentrations of low SES students, means that small rural and remote schools require disproportionately more resources to achieve the same level of effectiveness.

The issues related to resourcing schools in rural areas and the role of school size and student disadvantage have been highlighted in recent surveys of schools. In their examination of PISA data, Cresswell & Underwood (2004) investigated a range of school characteristics that may impact on the differences they observed in academic achievement. School principals were asked about the extent to which a range of factors hindered the learning of 15-year olds in their schools, including the quality of a school's infrastructure (e.g. conditions of school buildings, adequacy of heating and lighting, adequacy of classrooms). The extent to which school principals reported that learning was hindered by the quality of a school's infrastructure increased with degree of remoteness, which suggests that poorer buildings and facilities in regional and remote areas contribute to poorer learning outcomes.

A similar finding was obtained in relation to the extent to which principals reported that their students' learning was hindered by the quality of the school's educational resources. These included computers, instructional material, multimedia resources, library facilities, laboratories and facilities for fine arts. The extent to which school principals reported that learning was hindered by the quality of their school's educational resources also increased with degree of remoteness. A troubling finding was that the measure obtained from principals in Remote/Very Remote schools was more than one and a half standard deviations above the OECD mean.

While students in all locations reported similar access to computers at school, students in major cities had greater access to home computers, and of those who had a computer at home, students in major cities had greater access to the Internet (72 per cent), than students in inner regional areas (49 per cent) and students in Remote/Very Remote areas (41 per cent). With the rapid development of information and communications technology, it could reasonably be expected that these proportions have increased significantly since this data was obtained, but the question remains as to whether the gap between urban students and their rural and remote counterparts has persisted.

### Teacher supply

Staffing difficulties are a longstanding problem in regional and remote schools and, according to Vinson et al. (2002), constitute a significant barrier to higher retention and success rates, especially at senior secondary level. Difficulties with recruitment and retention mean that higher proportions of country teachers tend to be inexperienced, while few choose to stay beyond the minimum period (Yarrow et al., 1999). Some subjects are particularly hard to staff, notably English as a Second Language (ESL), maths, science and information technology (IT). Obtaining specialist teachers in music, sport, languages other than English and art can also be difficult. As Alloway et al. (2004) reported from their survey work in rural and regional communities, what distinguishes many rural locations is poorer access to facilities, resources and teachers. Students, parents and teachers in remote and rural areas reported being deeply concerned by issues of recruitment and retention of teachers, the level of teacher ‘churn’, and the availability of qualified specialised teachers.

Figure 14.3 illustrates this issue for New South Wales. It shows teacher turnover rates as measured by the number of new teachers as a percentage of all teachers, by region. The data is limited to those schools that received funding under the Priority Schools Funding Program (PSFP) in 2004. PSFP provides additional resources to support students in schools with high concentrations of socioeconomically disadvantaged families.

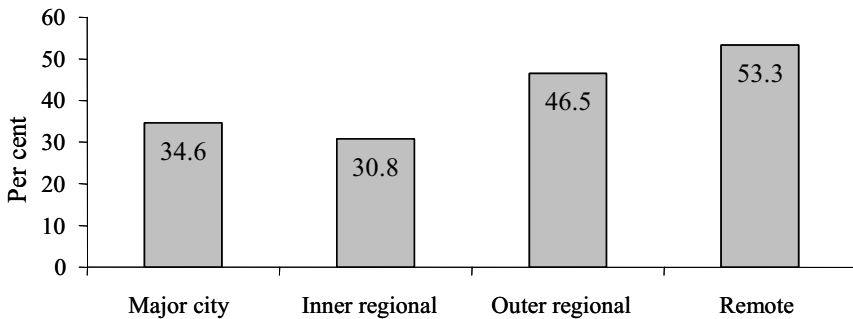


Figure 14.3: Teacher Turnover Rates Measured by the Number of New Teachers as a Percentage of all Teachers, by Region: Disadvantaged Schools in New South Wales, 2004

Source: Data provided by the New South Wales Department of Education and Training.

Note: Disadvantaged schools were those receiving funding under the Priority Schools Funding Program (PSFP) scheme in 2004.

Figure 14.3 shows that staff turnover, high in all PSFP schools, is very high in schools in outer regional and remote locations. Indeed, in these schools, on average, every second teacher moves on after one year. Such high staff turnover means that discontinuity is a constant feature of students' schooling experience. Moreover, the benefits of professional development and capacity building, particularly delivered

through new and innovative programs designed for disadvantaged students, do not stay with the school.

Cresswell & Underwood's (2004) investigation of principals' concerns about teacher supply obtained the strongest responses from schools in Remote/Very Remote areas of Australia, where they reported high levels of teacher shortage. A similar result was noted for principals from schools in Outer Regional areas. In contrast, principals from schools in Major City areas expressed the highest degree of satisfaction with the level of teacher availability. This study found that Inner regional principals reported the highest level of staff morale, while those from Outer Regional areas reported the lowest. The measures of morale for teachers in Major Cities and Remote/Very Remote areas were equivalent, and in an intermediate position. Also, the extent to which school principals reported that learning was hindered by the quality of teacher-student relations increased with degree of remoteness.

The issue of teacher supply is a critical issue in relation to regional and remote disadvantage. It is the development of the teaching skill base that is fundamental to establishing and maintaining the quality of teaching and learning in order to promote school effectiveness. But this is difficult when there is a continual exodus of teachers. The continual loss of staff leads to schools having to recruit high numbers of inexperienced and casual staff. Funds then have to be used for professional development and skill capacity building in a continuous way — having to pay again and again to build capacity without retaining the benefits it should bring.

#### *Provision and access issues related to further education and training*

Limited provision of nearby or accessible educational institutions has been found to play a key role in the decision of young people not to enter into further study or training. Polesel et al. (2005) examined the reasons young people gave for no longer being in education or training and found that the frequency with which respondents nominated the reason, "The program I wanted was not offered locally", increased with the level of remoteness. A related study found that school completers living in non-metropolitan regions of Victoria were more likely to identify the costs of travel or the need to travel long distances in order to reach education providers as a reason for them no longer being in study or training (Teese et al. 2005). The need to move away from home was also more likely to be nominated by school leavers living in non-metropolitan regions. Costs associated with study were also cited as an issue, indicating greater financial pressures acting on those who live outside city areas.

As the previous discussion indicates, VET is an important pathway to employment for school leavers in regional Australia, among both early leavers and Year 12 completers. However, geographic isolation presents significant barriers to study in Technical and Further Education (TAFE) institutes<sup>130</sup>. A current national study has found that geographic isolation is a compounding factor for already disadvantaged youth (Volkoff and Clarke 2006). In a survey of TAFE colleges

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<sup>130</sup> TAFE Institutes deliver the vast majority of VET programs. The cost of VET is borne jointly by state governments and student fees.



across Australia, access to transport was raised as a key issue for those in non-city areas. Almost all non-metropolitan TAFEs emphasised their struggle to overcome the barrier of poor public transport in regional areas. Several regional TAFEs also reported that a critical strain on their resources is tied to responding to increasing demand for off-campus and remote delivery for students lacking transport options.

### ADDRESSING RURAL DISADVANTAGE

This section will report two strategies that have been used to improve access and outcomes for students in rural areas. The first is the Country Areas Program, a Commonwealth funded initiative designed to compensate for the disadvantages experienced by schools in regional and remote locations. The second strategy involves the way in which VET in Schools programs have contributed to increasing retention and curriculum choice for students in non-urban areas.

#### *The Country Areas Program*

The Country Areas Program (CAP) is a Commonwealth Government initiative that provides supplementary funding to assist schools in rural and isolated areas. It was established in 1977 in recognition that students attending schools in rural and isolated areas experience educational disadvantage in a variety of ways, which have the potential to affect their learning experiences. Originally, CAP was devised as an adjunct to the Disadvantaged Schools Program, a program designed to assist schools in poor areas of Australia. Reflecting this origin, schools in the early years of the program were selected on the basis of both geographic isolation and social characteristics. During the early 1980s, however, the rationale of CAP changed from a concern with both rural and socioeconomic disadvantage to a concern for issues associated more directly with isolation. These include poor access to support services, high staff turnover, lack of breadth of curriculum and teaching programs, more limited access to quality information technology and infrastructure, and more limited access to cultural and social facilities and activities readily available in metropolitan centres. The aim of the program now is to provide schools in rural and isolated areas with additional resources that can be used to enhance the quality of educational experiences and outcomes for their students.

The Commonwealth allocates CAP funds to state and territory education authorities which manage the administration of funds. Therefore while CAP funding is used to support schools and their communities in a variety of ways, this can vary across state and territory. In some states direct grants are provided to schools, with funding allocations incorporating a base grant, a sliding enrolment scale, and an isolation factor. In some jurisdictions, schools and communities, individually or collectively, apply for special project funds for the development of new and innovative initiatives to address the effects of geographic isolation on student outcomes. In most jurisdictions separate allocations to schools are also made to enable school staff to participate in development days, workshops and conferences.

The targeting of CAP funding is linked to aspects of location and access to services. It is focused on smaller schools, but can cover a range of socioeconomic

characteristics. As a result, funding is not necessarily linked in any way to school achievement or academic performance. CAP-funded schools span the social scale, some among the most disadvantaged schools according to SES intake, and some among the most advantaged. This reflects the aim in CAP to address rurality and isolation issues rather than social disadvantage.

Curriculum provision and limited access to services and programs are key issues for rural and isolated schools. Many of the activities that are funded through CAP target these areas. They include initiatives that focus on complementing and enriching the curriculum through such activities as excursions, sporting events, visiting professionals, and the provision of non-core subjects such as Languages other than English and music. Funds are also used to extend senior school subject choice through programs such as VET in Schools and to support post-school pathways through careers expos and university orientation programs. Another focus of CAP funding is on enhancing the application of technology to teaching and learning through improvements in provision of Information and Communication Technology (ICT) and teacher professional development in its use. Professional development and support which addresses particular development needs of teachers in geographically isolated areas also features strongly in activities funded through CAP.

A review of the impact of CAP was conducted in 2003 by the Department of Education, Science and Training (DEST 2003). It provided a mainly positive view, pointing to the range of projects and services that have been implemented to improve learning, which include the development of websites, improvements in ICT provision and infrastructure, regional and local planning and annual teachers' conferences. These have helped establish a sense of 'community' among CAP-funded schools which in turn has promoted a sense of purpose and sharing of ideas. Many of the opportunities, initiatives and developments would not have been possible, according to surveys of participating schools, without access to CAP funds.

The anecdotal and documented evidence suggest that CAP is having an impact on extending services and providing isolated students and communities with access to services and programs not often available in remote locations. Progress towards meeting the more difficult-to-attain targets of CAP — to improve the participation and achievement levels of rural and isolated students — is harder to assess. For one thing, a major difficulty with quantifying the impact of CAP on students' learning outcomes is the supplementary nature of the funding, and the relatively small amounts of money involved. Because many CAP schools combine funding from a range of sources, it is not always possible to isolate the impact of CAP funding. For this reason DEST argues that the imposition of performance measures to quantify learning outcomes would reveal little meaningful data. However, it is possible to compare the performance of rural and isolated schools receiving CAP funding against other schools to assess differences after controlling for a range of intake factors.

Lamb, Teese and Helme (2005) undertook a regression analysis using achievement and funding data from government schools in New South Wales. The analysis predicted mean levels of primary school achievement using a variety of indicators as independent variables. The predictors included concentrations of

indigenous students, mean SES, density of integration students, school size (enrolments) and a variable identifying CAP schools. Four achievement outcomes were measured: mean Year 3 literacy and numeracy results, and mean Year 5 literacy and numeracy achievement. On indicators of literacy achievement, achievement in CAP schools was equivalent to achievement in non-CAP schools, all else equal. Achievement is affected strongly by social intake, numbers of indigenous students and numbers of integration students, but after controlling for these effects, there were no significant gaps in achievement between CAP-funded schools and other schools.

On indicators for numeracy achievement, however, there were positive gains for CAP schools and these were not removed after taking into account social intake indicators and school size. All else equal, CAP schools were doing better than both non-metropolitan schools and metropolitan schools for Year 3 numeracy achievement and better than other schools across the state in Year 5 numeracy.

It cannot be assumed from these results that the gains in numeracy achievement were linked to the effects of CAP funding. This is because it is not possible to fully isolate the effects of CAP funding from the effects of other programs. However, the results do show that achievement levels in CAP schools were as strong, or stronger, as in other schools after controlling for various social and other intake factors.

### *VET in Schools*

Vocational education and training (VET) represents one of the most significant reforms to the senior secondary curriculum in Australian schools over recent decades. Introduced to expand curricular options and provide work-based training and qualifications, the numbers of school students participating in VET have more than trebled since the mid-1990s (Lamb & Vickers 2006). The growing popularity of VET in schools (VETiS) is partly linked to student demand for vocational skills and training prior to leaving school as well as demand for flexible options and choice in school programs. VETiS programs offer an alternative to the traditional academic subjects which largely lead to university study and have been a source of dissatisfaction with some groups of students, particularly those from disadvantaged backgrounds. VETiS participation rates in the senior years of school are much higher among students from lower SES backgrounds and for those with lower levels of school achievement (see Lamb and Vickers 2006). In rural and isolated schools, where there are lower rates of school completion, lower achievement levels and higher proportions of young people disaffected with school, VETiS courses have proven popular. In these communities, participation in VETiS overall is higher than average. It is certainly much higher than in urban areas. So VET is playing a much more important role in those communities relative to the cities, whether it is VETiS or transition to VET after school. In the context of improving retention and strengthening post-school options in rural and remote areas, VETiS has been an important development.

Figure 14.4 shows that at a national level, participation in VETiS varies by region. When students enter the post-compulsory years VETiS is an important option. For students in Year 11, about 23 per cent of students in major city areas

took at least one subject or unit of study in VET. The rate reached 32 per cent for students living in outer regional areas and about 31 per cent for those in remote locations. At Year 12 level, the rates are slightly lower for all regions. However, the rates of participation remain higher in regional and remote areas.

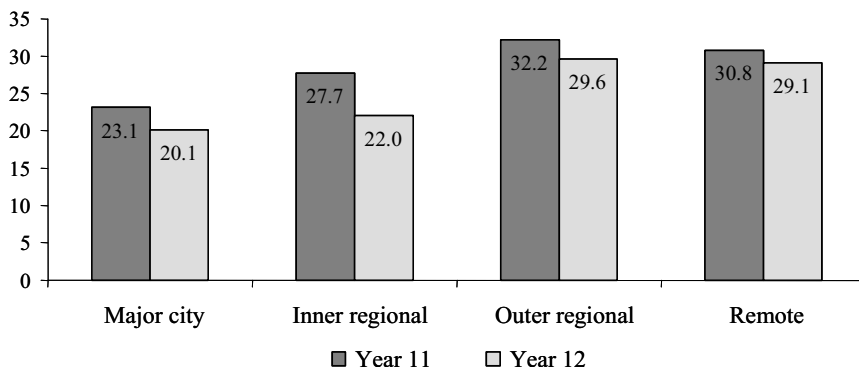


Figure 14.4: National Rates of Participation in VET in Schools, by Region: Year 11 in 2000 and Year 12 in 2001

Source: Figures derived from the Longitudinal Surveys of Australian Youth (LSAY) Y98 cohort. Participation in VET is defined as undertaking at least one unit or subject of VET. N= 8364 in Year 11 and 7131 in Year 12.

Participation rates show that VETiS has been an important development in the senior school curriculum for students in rural and remote Australia. This is partly because as an area of study it tends to attract students who are less interested in the more traditional academic curriculum, those with lower levels of school achievement, those from lower SES backgrounds and those less likely to pursue a university pathway after leaving school (Lamb and Vickers 2006). There are higher concentrations of these students in rural and remote parts of Australia. Destination surveys suggest that there are positive outcomes for VETiS, that it helps promote higher rates of school completion among students who might otherwise drop out of school before Year 12, and it also helps contribute to continuation in further study and training in the transition from school (see Lamb and Vickers 2006).

While it is an important development for students in non-city schools, VETiS also highlights some of the disadvantages associated with the provision of schooling in rural and remote communities. Population decline and the resultant demise of various industries in many rural communities, together with continued high demand for the limited resources in small rural secondary schools has seriously impacted on some schools' capacity to offer a comprehensive range of subjects, including VET, in the senior years (CEP 2001). For small rural communities, a major problem with VETiS is the limited availability of appropriate work placements, structured workplace learning being a core element of VET courses. Many schools (particularly those in economically depressed areas) have difficulties in finding adequate work placements in their local communities. As Vinson (2002) in an

enquiry into public education in New South Wales found, teachers from rural and regional centres report having particular difficulty in finding relevant work placement sites for their VET students, especially in high demand subjects such as Hospitality or Information Technology. To meet the requirements, students are sometimes forced to travel to nearby centres to attend an appropriate work placement site. Not only are such practices costly in time and money, but the effort also cuts into other important school commitments.

The costs associated with offering VETiS are a major barrier for rural and remote schools. VETiS is a resource-intensive program to establish and manage. Apart from the direct and actual dollar costs involved, there is the disproportionate use of resources by participating students. Staffing issues are also a major barrier. Successful programs rely upon the availability of committed individuals and staff with specific skills, and on the availability of specialist equipment. Rural and remote schools can have more difficulty than their city counterparts in attracting and keeping qualified staff and difficulty in replacing specific teachers in order to maintain courses.

Some communities and schools are attempting to respond to these difficulties. Kilpatrick (2003) found that VETiS was most effective when education and training provision was targeted to local needs, and the key to meeting local needs, particularly in remote and rural areas, was collaboration and partnerships. Partnerships may involve other schools, registered VET providers, industry groups and/or local employers and are considered an effective means of harnessing community resources. Stokes et al. (2006) noted the ability of partnerships to improve access to VET for regional and remote students, respond to local skills shortages, improve young people's work networks, and assist remote and regional communities to keep more young people in the community. This process builds community capacity and social capital, and therefore has the potential to contribute to community renewal (Johns 2003).

## CONCLUSION

There are many issues that confront schools in rural and isolated communities in the quest to provide high-quality education. While schools in these areas have many of the same needs as other schools, they often face different challenges based on their unique characteristics. Challenges posed by size, declining enrolments and geographic location put rural schools at an economic and educational disadvantage, making it difficult to generate funds, recruit and retain teachers, offer an extensive range of programs in the post-compulsory years and maintain school facilities.

Recruiting and retaining teachers is a critical issue. It is this issue that continues to seriously undermine efforts to enhance the quality of educational experiences and outcomes for rural and remote students and provide them with the same opportunities as students in metropolitan schools. Fundamental to any framework of change will be the need to promote continuity in teaching staff in rural and remote schools and to recruit quality teachers. A study of long-staying rural teachers in New South Wales (reported in Vinson 2002) identified two important attributes of these teachers: completion of a rural practice teaching experience as part of their teacher

education program, and attendance at a rural teacher education institution for the pre-service program. Few accredited teacher education institutions prepare teachers to teach in rural areas. More effort needs to be made to recruit teacher education students from rural and remote areas, attract experienced teachers, and encourage them to stay. This requires meaningful incentives, and support or mentoring for new teachers in regional and remote schools, so that they are more able to manage the challenges that characterise these settings. Broadening staff incentives such as rental subsidies, salary supplements to cover the additional costs of food and living, and travel allowances for professional development, would also assist with staffing rural and remote schools.

Funding and resources are also major issues. Extra costs are associated with curriculum provision, administration and student support services in schools in isolated locations. Funding for rurality and isolation, therefore, needs to be proportionately greater simply to meet the additional costs of provision and the distance from other providers. But many rural and remote schools also serve larger numbers of students from the most disadvantaged backgrounds, including indigenous students and those from low SES families, meaning that they require additional assistance to meet the needs of serving disadvantaged groups as well as the needs associated with geographical isolation. Rural schools tend to be smaller in size and this exerts increased resource pressures on such schools in pursuing the same educational goals as schools in urban centres. Funding through schemes such as CAP does help schools offer supplementary activities that enrich students' educational, social and cultural experiences. But levels of funding through CAP are quite low, relative to other forms of equity funding. Many of the programs that rural and remote schools need to extend are resource intensive. For example, expanded coverage of information technology, and its qualitative improvement, particularly via fast broadband, or satellite, are important in rural schools, but costly to establish and maintain. The development of curriculum that is able to be implemented across the full range of institutions and settings, and adaptable for distance education, is also important, as a means of minimising the disadvantage long experienced by rural and remote schools. Equally, the extension of VET opportunities in country areas would widen rural pupils' options, including for employment.

Many of the broad reforms over the last two decades affecting all schools have worked to intensify rather than reduce the gaps between rural and urban schools. The onset of neo-liberal school reforms in Australia over the last two decades which promote a market-based ideology of choice and competition is antithetical to the traditional public good functions of schools (Welch and Mok 2003; Welch 2006). Decentralisation, a key element of neo-liberal reform, has exacerbated differences between better-resourced and poorer communities (Smyth 1993; Welch 1996, 2006), the latter often in rural and remote regions. As better-resourced schools, replete with more economic, social and cultural capital, increasingly organise themselves to confer even greater advantage on their families of users, the gap widens between such schools and those located in communities that lack the same levels of capital.

The development of effective, good quality education for rural and remote communities cannot be achieved by the communities alone. It is contingent upon outside support, including from state and federal governments, and related agencies.

Rather than market-based autonomy, it is cooperation and support that will be needed to enhance school services in rural and remote Australia, principles basic to any notion of quality and equality for schools.

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# Transforming School Education in China to a Mass System:

## Progress and Challenges

*Stephen Lamb and Zhenyi Guo*

### INTRODUCTION

China is undergoing massive economic and social change. It is the world's fastest-growing major economy. According to one source, during the past three years China has accounted for one-third of global economic growth (measured at purchasing-power parity), twice that of the United States (Economist 2004). In the past year, China's official GDP growth rate has surged to 9.7 per cent. The transformation that is underway has major implications for China's school system. Rapid economic development requires an education system that can keep pace with the growing demand for a more highly skilled workforce. However, China faces huge challenges in doing this. It has the largest population in the world, with the second biggest school-age population of over 250 million children. But it is still a developing country with a limited supply of educational resources. Globally, in per capita terms, the country is lower middle-income and 150 million Chinese fall below international poverty lines (Riskin 2004). Economic development has generally been more rapid in coastal provinces than in the interior, and there are large disparities in per capita income between regions.

Considerable progress has been made towards transforming the school system. Fifty years ago, schooling in China was the preserve of a minority. In 1952, for example, less than 50 per cent of the relevant school-age population enrolled in primary school, and less than half graduated (Ministry of Education 1985). Consequently, illiteracy rates were high and the pool of young people entering the labour market was largely unskilled. The structure of the economy prior to this time demanded little more. Today presents a different picture. Figures for 2004 show that over 95 per cent of the population enrolls in primary school and progresses to junior secondary school (Ministry of Education 2005). Graduation from junior secondary school is over 80 per cent. These basic levels of schooling have become largely universal. Even so, schooling is still far from a mass system. Only about 50 per cent of young people enrol in the senior secondary or post-compulsory years and variations in access and completion remain large across different regions, groups and populations.

This chapter will look at school expansion and the issues associated with the transformation of post-compulsory schooling into a mass system. It will do so by

focusing on progress in just one province, Yunnan. The case of Yunnan Province is used because it is a province that illustrates many of the main challenges confronting China in building a mass system of schooling to meet the demands of a rapidly changing occupational and industrial structure. Yunnan is a large mountainous region in the southwest of China, with a population of over 42 million in 2001. Ethnic diversity is a striking feature, with minority nationalities comprising over one-third of the total population. Yunnan is one of the poorest provinces in China. Illiteracy rates have fallen steadily over the past 40 years in line with growth in the proportion of the population that has at least completed primary school education (see Figure 15.1). Even so, today, Yunnan is a province that, compared to others, has a relatively high rate of illiteracy and a population with one of the lowest educational attainment levels. Given these features, examining the progress towards the development of a mass system of post-compulsory schooling in Yunnan is illuminating because it brings together issues of family, region and resources, critical factors in the context of a country that is developing rapidly and seeking a more highly educated and skilled workforce.

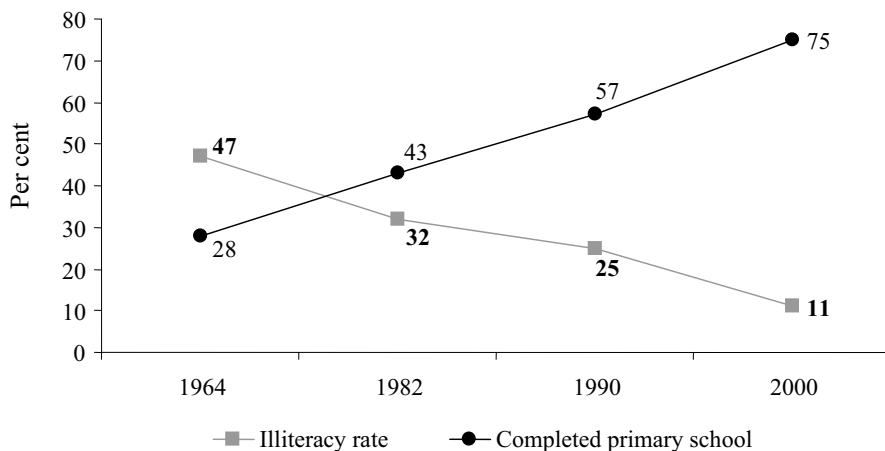


Figure 15.1: Illiteracy Rate and Primary School Completion in Yunnan: 1964, 1982, 1990 and 2000 (%)

Source: The Reference of Population Census of Yunnan in 2000 (Office of Population Census of Yunnan 2002)

We will begin by describing the transformation of the school system in Yunnan. Some historical details will provide important context outlining the size and structure of the school system and how this has changed over the last 40 years. Important here will be an outline of progress towards the building of a universal system of primary schooling and a mass system of junior secondary schools. Attention will then turn to participation in post-compulsory schooling. This is the level of schooling where provision and issues of access are most pressing. The

discussion will begin with an outline of developments, but it will move on to an examination of the major impediments to further growth, including provision, as well as resource and population factors. The final section will provide some policy suggestions for accelerating the pace of improvement.

### TRANSFORMATION OF THE SCHOOL SYSTEM IN YUNNAN

In his classical account of the development of U.S. education, Trow (1977) described the evolution of the U.S. secondary school system, characterising the various stages of progression towards a mass preparatory system. In the early stages (nineteenth century), the U.S. secondary school was described as an elite-preparatory institution enrolling only a small proportion of the age cohort and offering an academic curriculum designed to prepare its graduates for entry to university. During this period, participation was limited and graduation rates were low. The next stage (before the 1940s), was a stage of expansion in which secondary schooling was opened up to the broader population, becoming a mass-terminal system with widespread participation to the end of secondary education, but with most students not continuing beyond that point. This mass-terminal system of secondary schooling was transformed after the 1940s to become a mass-preparatory system in which the college-preparatory curriculum again assumed major importance, with a large expansion in the numbers prepared for university. The specific features of Trow's account of school evolution may have been applied to the transformation of the U.S. high school, but the principles of development have wider applicability and are a useful gauge to examine the development and transformation of schooling in Yunnan.

The situation in the middle of last century in Yunnan revealed a school system similar to the elite-preparatory U.S. system of the nineteenth century. It was a school system serving only a small part of the population and had a focus on preparation for higher education. In 1949, in Yunnan, there were only a limited number of primary and secondary schools, and, apart from a few universities, broader tertiary institutions were largely non-existent. Despite a population of 5 million school-age children, in the whole province there were only 6 kindergartens, 5,320 primary schools, 17 specialised secondary schools, and 134 general secondary schools. The only tertiary institutions were three small universities. At this time, minority nationalities (today Yunnan has the second largest population of minority nationalities in China, one of the country's three provinces with an ethnic population of over 10 million) had hardly any students attending tertiary, secondary or primary schools. Schools at this time, particularly secondary schools, were more often located in cities and towns, with the large rural population in Yunnan poorly served.

At this time, for those who participated, education began with kindergarten (ages 3–6) or primary school (ages 6–12), and continued with secondary education (ages 12–18), and then university. Completion and transition rates were low. Very few students at this time went to secondary education (less than three per cent of the population), most who went graduated, but only a third went on to senior high school. Of those who graduated from senior high school, very few went to university (less than 1 per cent of school students). The curriculum in the general secondary

schools was a preparatory program for university. There were a few specialised or technical secondary schools providing a largely terminal vocational stream. Enrolments in these schools, though, were negligible.

After this period, the school system expanded and expanded fairly rapidly, firstly with the universalisation of primary schooling and then the expansion of junior secondary schooling into a mass system.

### *Achieving a universal system of primary schooling*

The period following the founding of the People's Republic of China in 1949 focused on national reconstruction. A key priority was the building of a national system of education, organised through centralised planning and the nationalisation of all institutions (see Tsang 2000). A major early priority was the policy of universal primary education. This was a major challenge in Yunnan as, in 1949, primary school enrolments totalled about 168,000 (only a fraction of the primary school-age population) and the primary school entrance rate was only 7.8 per cent compared to about 20 per cent nationally (Yunnan Education Bureau 2002). About 90 per cent (80 per cent nationally) of Yunnan's population was illiterate. To support the goal of universal primary schooling, the curriculum for this stage of schooling was overhauled during the early 1950s, and greater emphasis was given to increasing the size and quality of the teaching workforce.

The impact of the national strategies was to dramatically increase rates of participation in primary school. The 1950s saw the primary entrance rate increase from 7.8 per cent at the beginning to 47.0 per cent by its close (Yunnan Education Bureau 2002). Despite this growth, there was much ground to make up to achieve universal participation. Figure 15.2 shows that in 1964 about 52 per cent of the primary school-age population were enrolled. While this was a huge improvement over the level of less than a decade earlier, the rate of completion or graduation remained low. Only about one-quarter of those enrolled in primary school actually graduated from this stage of schooling. This meant that in 1964 in Yunnan only about 1 in 8 children successfully completed primary schooling.

Over the next two decades, the scale of participation in primary schools increased substantially. By 1982, participation in primary school education had reached 81 per cent and was well on the way to becoming universal. Completion rates at this time were also growing. However, the graduation rate still lagged behind the rate of enrolment, meaning that at this time about one in two children in Yunnan completed primary school, a rate well below the national goal of universality and also below the national rate of three in five children.

The 1980 directive from the central government, "Decision on Several Problems concerning Universal Primary Education" (The Central Committee of the Chinese Communist Party & The State Council 1980) spurred the provincial government of Yunnan to examine the extremely uneven development of primary schooling across the province. It helped identify the need for additional construction of primary schools in some of the more remote areas which had previously been poorly served and the establishment of boarding schools in order to address issues of inadequate transportation and remoteness. In the early 1980s, 340 boarding schools (primary

and secondary) were built and over 3,000 half-boarding primary schools were established by the provincial government. Considerable effort was channelled into meeting the provision needs of a dispersed and largely rural population.

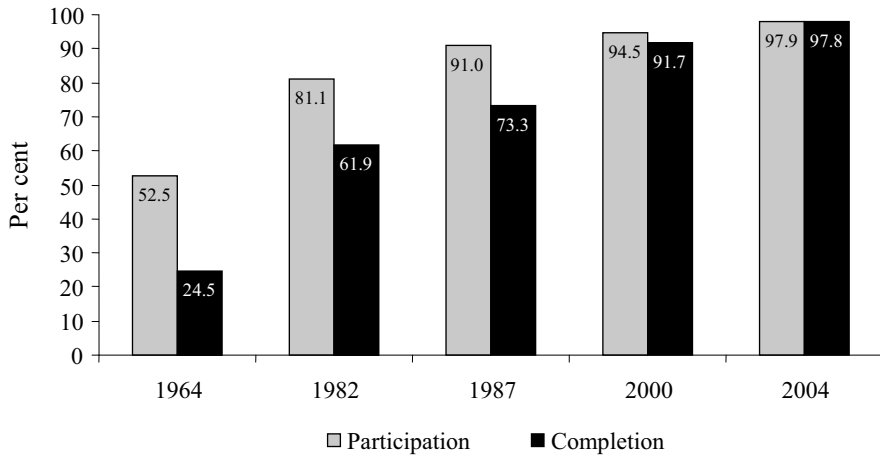


Figure 15.2: Primary School Participation and Completion Rates: Yunnan

Source: Yunnan Education Bureau (2002) and the Ministry of Education (2005)

At a national level, a major policy initiative was announced in 1985, legislating for 9 years of compulsory schooling with a target that this be achieved by the year 2000. Figure 15.2 shows that in Yunnan, participation in primary schooling was in excess of 90 per cent by 1987 and by 2004 had reached 97.9 per cent. What is striking is the growth in the rate of completion, jumping from 73.3 per cent in 1987 to 97.8 per cent in 2004.

By 2004, primary schooling in Yunnan had become a universal system.

#### *Establishing a mass system of junior secondary schooling*

With low rates of primary school participation and completion in Yunnan, enrolments in junior secondary schools in the 1950s were extremely low. In 1951, only 31,137 students were enrolled in less than 140 schools. This represented less than five per cent of the eligible school-age population. Potential students for the general secondary schools were required to take entrance exams, as the programs offered at this level and type of school were academic in focus, providing a preparation for senior secondary schooling and university. Junior secondary schooling in the 1950s in Yunnan was an elite preparatory system.

During the 1950s and 1960s successive reforms were introduced to increase participation in secondary schooling. Changes included the expansion of general secondary education and diversification of the curriculum (Tsang 2000). However,

any improvements in secondary school participation would necessarily lag behind improvements in graduation rates from primary schooling. Therefore, even in 1964, when primary school participation rates were growing, the rate of participation of the relevant school-age population at the junior secondary level was a mere 6 per cent (see Figure 15.3). With such a low enrolment rate, the rate of graduation was reasonably high (63.5 per cent), because such highly selected entrants largely continued on in school.

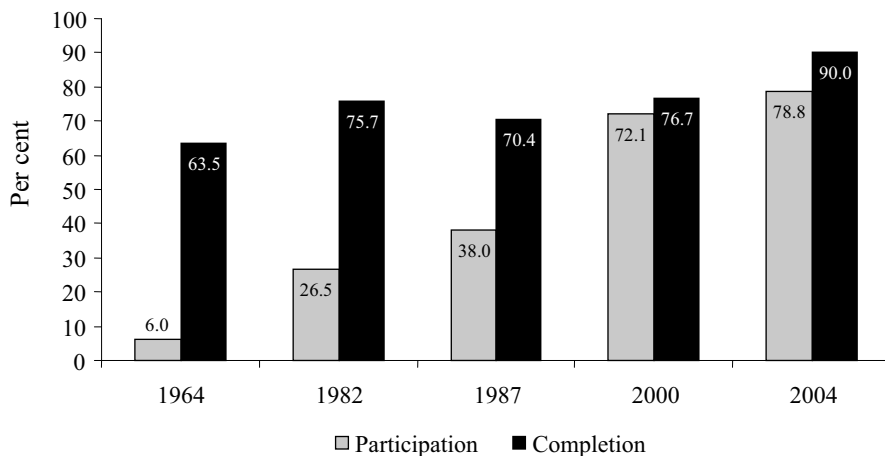


Figure 15.3: Junior Secondary School Participation and Completion Rates: Yunnan

Source: Yunnan Education Bureau (2002) and the Ministry of Education (2005)

At the secondary school level, enrolment rates rose gradually. Even in the early 1980s, while completion rates were high (over 75 per cent in 1982), participation rates were low, with only about one in four young people of school age enrolling in secondary school. Efforts were made during the 1950s and 1960s to diversify the curriculum and expand the focus of secondary schooling to include vocational education. Vocational schools were introduced during the 1960s in urban areas providing a more diversified system of secondary schools. However, this was reversed during the 1970s in response to the view that the diversified structure of secondary education promoted social differentiation and elitism. This led to the conversion of most vocational schools into general secondary schools. All junior secondary schools in the early 1970s provided a general education.

During the 1980s there was renewed emphasis on vocational education in the secondary years. This helped promote an expansion in the number of vocational schools, but the numbers at junior secondary level remained small. Even in 2004, the number of enrolments at junior secondary level in vocational schools in Yunnan was only about one per cent. At this level of schooling, the focus has remained on the provision of a more general rather than diversified curriculum. In 1987 participation

rates in the junior secondary years were still low, with 38 per cent of the relevant school-age population enrolled. With the impact of the national policy reforms (beginning in 1986) that prescribed 9 years of compulsory schooling, the rate of participation quickly grew, reaching 72.1 per cent in 2000. By 2004, the enrolment rate was almost 80 per cent and the completion rate was at 90 per cent. Most young people in Yunnan now progress from primary school to junior secondary school, and most graduate from this stage of schooling.

Junior secondary schooling has largely become a mass system. It is true that in Yunnan it has still not reached quite the almost universal levels of participation and completion evident in the primary school system, but it is now not far behind.

### *Senior secondary schooling in transition*

Compulsory education ends at the conclusion of junior secondary school. The reform of the education system announced in 1985 required nine years of compulsory schooling: six years of primary and years years of junior secondary (or the option of five years of primary and four years of secondary). Junior secondary schooling has largely become a mass system, but it is a terminal system. Progression rates to the senior secondary years remain low.

Figure 15.4 shows that in 1964 only 3.1 per cent of the relevant school-age population was enrolled in senior secondary schools. The completion rate was high for this level of school, but access was limited, based on academic selection (exam-based) and most who enrolled at this time graduated. Rates of participation grew slowly. In 1987 still only 1 in 10 young people enrolled in senior secondary school.

Policies were implemented during the 1980s to expand participation. In 1985, the Central Committee of the Chinese Communist Party announced a major reform of senior secondary education, calling for renewed emphasis on vocational education in the secondary years (Tsang 2000). This helped promote an expansion in the number of vocational schools. As the number grew, the system of secondary education became more diversified. Unlike the U.S. secondary school system which was transformed into a mass system by incorporating vocational education within a comprehensive school model, the Chinese secondary school system separated its programs along institutional lines, building a system of general schools (academic), technical schools (industry-specific vocational education), vocational schools (broad vocational education) and workers' schools (vocational skills training under the direction of the Ministry of Labour). The expansion in focus (away from simply an academic preparatory program) was necessary to attract more young people to remain at school beyond the junior secondary years. To increase participation, programs needed to be offered which could cater to the more diverse population that now expected to participate in upper secondary education. The focus on expanding access through program diversification was consistent with the aim of promoting equity in educational participation. However, expansion would also serve the interests of economic development through more direct training of young people with the skills needed for the workforce in a more industrialised economy. Economic and national development goals were important driving forces in the expansion of a diversified secondary school system.



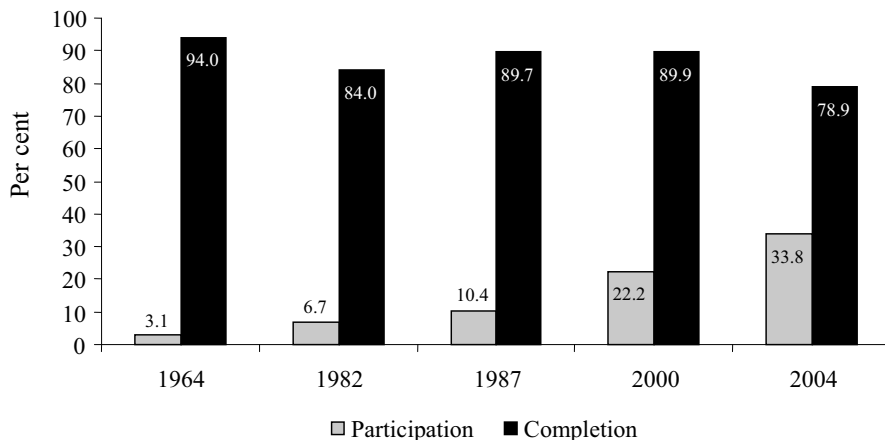


Figure 15.4: Senior Secondary School Participation and Completion Rates: Yunnan

Source: Yunnan Education Bureau (2002) and the Ministry of Education (2005)

In 2004, approximately one in three young people in Yunnan were participating in post-compulsory schooling. This was more than three times the rate in 1987. The growth that has occurred over that time is partly due to the renewed emphasis on vocationalism and the expansion in the provision of non-academic programs. Of the students participating in upper secondary education in 2004, 41 per cent were in specialised (20.9 per cent), vocational (15.3 per cent) or workers' (4.8 per cent) schools. In 1982, only 25 per cent of upper secondary students were enrolled in schools offering vocational programs.

Senior secondary schooling in Yunnan is growing and its role is diversifying. It comprises both general and vocational tracks, with the general education senior schools continuing to provide preparatory education for university entry, and the vocational and specialist schools operating more as a terminal system. The flows of students through the structure of senior secondary schooling are presented in Figure 15.5. It reveals that while a proportion of graduates exit school at the completion of primary school, the vast majority continue into junior secondary. At the end of this stage of schooling, however, many leave school altogether and seek entry to the labour force. Those that remain and progress to senior secondary schooling become separated, with some entering general secondary schools, and others entering specialised schools or vocational or workers' schools. Senior secondary school destination is dependent on success on senior secondary entrance exams.

In Yunnan, senior secondary schooling deals with the diversity of students largely through providing separate schools based on student academic talents. Diversity in populations is accommodated through diversity in institutions, rather than the provision of diverse programs in a single institution. This is likely to support continued expansion in post-compulsory school participation, though it may

do so at the cost of intensifying social inequality through streaming, if the evidence of systems in other countries related to the provision of vocational education is any guide (see, for example, Polesel \*2007).

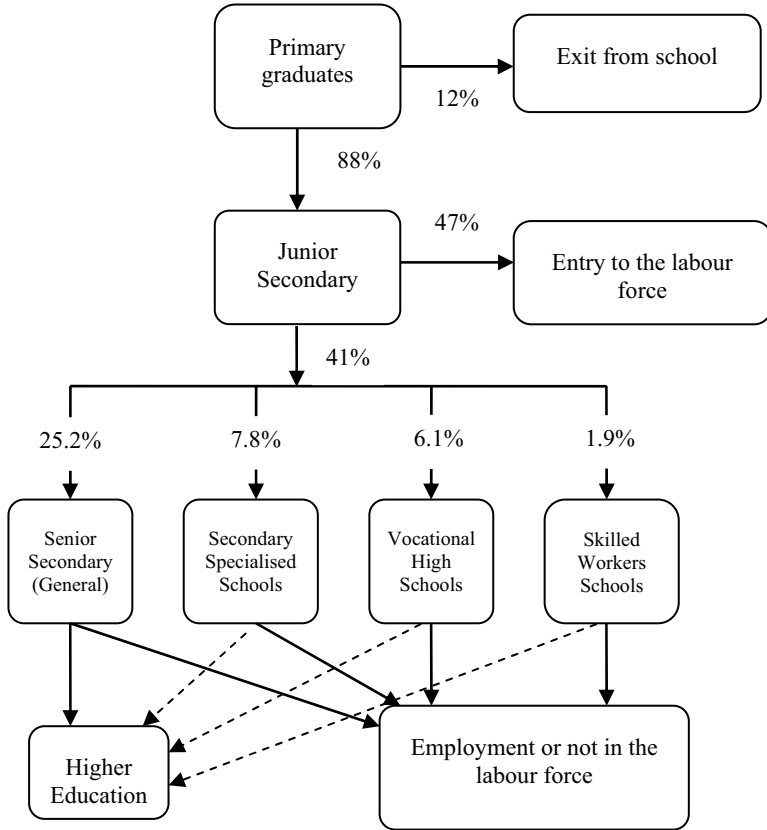


Figure 15.5 Flows of Students Through Exit and Progression Points: Yunnan, 2004

Source: Yunnan Education Commission, 2001-2005

In terms of crude measures of participation, senior secondary schooling is now the main stage of unequal educational opportunity. As Figures 15.4 and 15.5 show, levels of participation remain low. While junior secondary school now provides most young people with an education for work and life as well as for progress to upper secondary education, for the majority it has become the key exit point from school. The transformation into a mass system of senior secondary education system may be underway, but still has a considerable way to go and will require sustained and concentrated effort. How to expand post-compulsory schooling presents a major challenge as there is a range of barriers.

## IMPEDIMENTS TO BUILDING A MASS SENIOR SECONDARY SCHOOL SYSTEM

*Urban and rural disparities*

Education remains a scarce resource in Yunnan, with senior secondary schooling achieved by only a small proportion of the population. The capacity for the senior school system to be expanded and accommodate greater numbers of students is limited in part by huge disparities in provision between rural and urban areas.

China remains a largely rural population. In 2004, according to statistics on school enrolments, approximately 66 per cent of children live in rural or remote parts of China. Approximately 16 per cent live in cities and a further 18 per cent live in provincial centres or towns ("county cities or towns"). But Yunnan is a large mountainous province, with a much larger rural population than other provinces. In 2004, 83 per cent of school-age children were recorded as living in rural areas. A further 11 per cent were described as being in provincial centres or towns and only six per cent were in urban areas.

Figure 15.6 displays the distribution of primary, junior secondary and senior secondary schools by region in 2000. It shows that the vast majority of primary schools are actually located where the population is largely based. Over 90 per cent of primary schools are situated in rural areas of Yunnan where the bulk of the population actually is. It is a very different picture to the 1960s when primary schooling was not yet a mass system, and proportionately more were located in urban centres and county cities and towns. A mass system requires provision to be based where the population is located, and this has been achieved with primary schools, a necessary ingredient to building a universal system. Junior secondary schools are well on the way to becoming a universal system, and, though not matching the population distribution as evenly as primary schools, are largely provided where the population base is.

This is not the situation for senior secondary school, however. In 2000, while 83 per cent of the population was located in rural areas of Yunnan, only 12 per cent of senior secondary schools were. The bulk of upper secondary school provision is in urban cities (25 per cent, but only six per cent of the population), and provincial or county cities and towns (63 per cent, but only 11 per cent of the population). The lack of provision in rural areas means that the large population from this background is discouraged from participating. Provision is a major source of inequality at this level of schooling.

Information on the distributions of teachers also highlights the disparities across the regions of Yunnan. Figure 15.7 shows patterns that reflect the uneven distributions of schools. One feature to note from this figure is that the percentage of teachers is lower at each level of schooling, than the percentages of schools shown in Figure 15.5. The reason is that schools in rural areas are much smaller, on average, than schools in urban centers and provincial or county cities and towns. For example, 93 per cent of primary schools are located in rural areas, but they account for only 80 per cent of teachers. Similarly, 12 per cent of senior secondary schools

are located in rural areas of Yunnan, but only eight per cent of senior secondary teachers are.

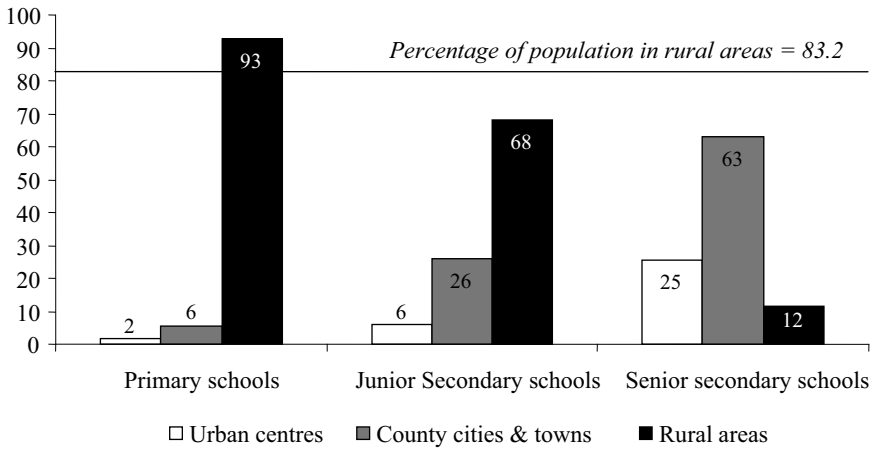


Figure 15.6: Distribution of Schools, by Region: Yunnan, 2004 (%)

Source: Ministry of Education (2005)

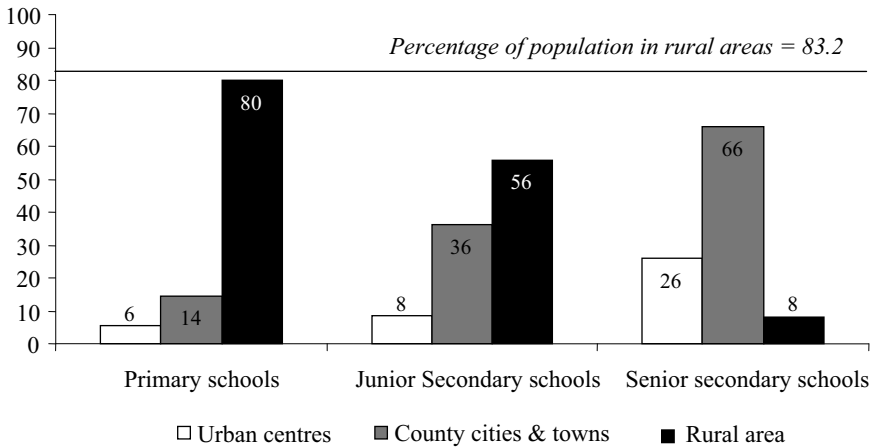


Figure 15.7: Distribution of Teachers, by Region: Yunnan, 2004 (%)

Source: Ministry of Education (2005)

Schools in rural areas tend to be small. For example, because of the unique geographical features of Yunnan, many of the primary schools are located in mountainous areas. The one-teacher school model has been a common feature, historically. In recent years some improvements have been made, but there are still over 12,000 one-teacher schools across the province. School size brings with it other resource implications. The smaller the school, the higher the relative cost of provision. In senior secondary school many of the programs (such as the sciences) require substantial resources. Where the numbers become small, as in rural areas, the costs of provision become much greater on a per capita basis.

Regional disparities highlight critical issues in the development of a mass system of senior secondary schools. To increase levels of participation will require an extensive program of development and expansion in the number of schools. The provision of physical facilities will be one major issue. However, it is not just a matter of increasing the number of schools, but also ensuring that they are provided closer to the population centres. This will mean a massive expansion of schooling in rural and remote areas. Given current patterns of provision, it is a monumental task.

Inequalities associated with region, also reflect social divisions. Poverty levels are higher in rural and remote populations and educational attainment levels are lower. For example, illiteracy rates are about six per cent in the urbanised city of Kunming in central Yunnan, but over 23 per cent in the rural area of Nujiang in the north-west of Yunnan. Lower participation levels in rural areas are likely to in part reflect cultural differences. Rather than being simply a matter of provision or access, the lower use of school made by many rural (often poorer) families may well be related in part to economic pressures and in part to lack of history and experience in the highest levels of schooling. Early entry to work is a matter of customary practice, involving a set of ideas and assumptions, both economic and cultural, that make it acceptable, even honourable.

### *Teachers*

The quality and availability of a teaching workforce is a critical issue in expanding school systems. According to one assessment of the teaching workforce in the poorer areas of Yunnan, insufficient quantity, low quality and an inability to retain teachers has worked to constrain the levels of school development (He 2000). It noted that, "...although according to the statistics there has been a great increase in the number of qualified teachers, in reality, some of them do not have the appropriate background. This is most evident in the teaching of sciences, where out-of-date teaching methods are used, and there is a lack of knowledge of educational science and poor ability in giving guidance to students' practice" (He 2000:48).

The quality and availability of teachers is an on-going issue. Figure 15.8 shows that teachers in primary schools have low levels of qualifications. The vast majority hold secondary school certificates or less. Only two per cent have university training. At senior secondary level, the majority of teachers have university qualifications (80 per cent). However, if this level of schooling is to become a mass system, enrolling the majority of young people in Yunnan, it will need a massive

increase in the number of teachers. Given the numbers of teachers at any level who have university qualifications (14 per cent), this presents a major challenge.

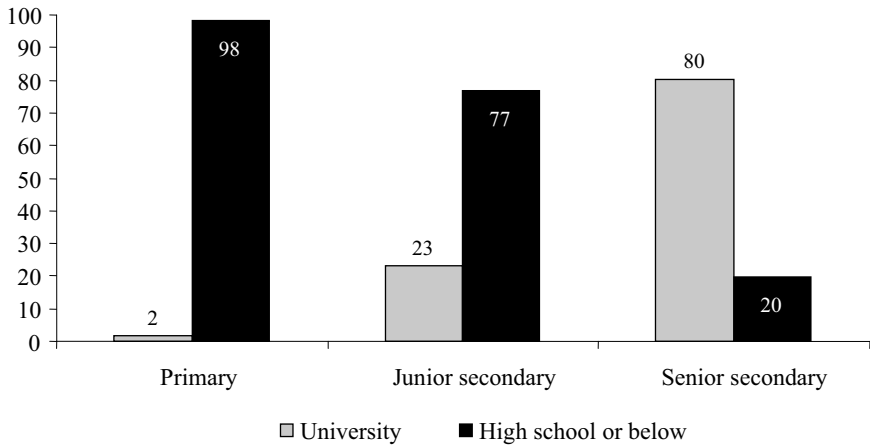


Figure 15.8: *Qualifications of Teachers, by Level of Schooling: Yunnan, 2004 (%)*

Source: Ministry of Education (2005)

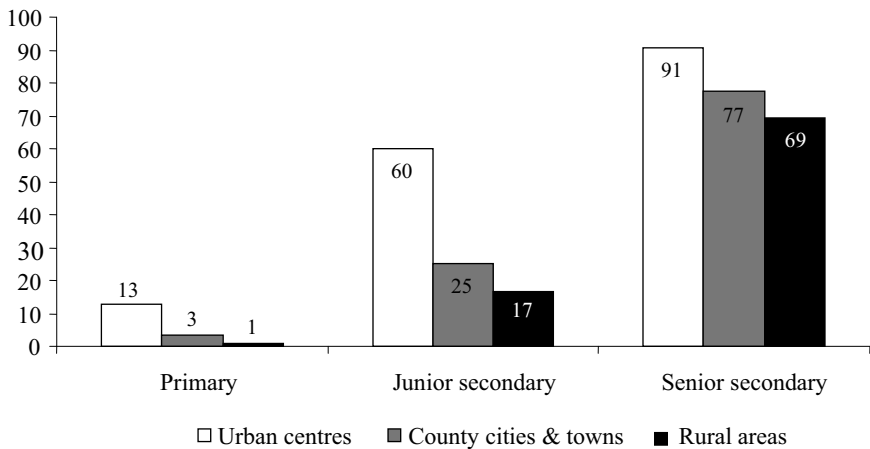


Figure 15.9: *Teachers with University Qualifications, by Region and Level of Schooling: Yunnan, 2004 (%)*

Source: Ministry of Education (2005)

The distribution of university-qualified teachers across the regions of Yunnan is also a critical issue. Populations in rural areas of Yunnan have access to proportionately fewer university-qualified teachers at every level of schooling. At primary school level, for example, 13 per cent of teachers in urban centres are university trained, compared to only one per cent in rural areas. At senior secondary level, the majority of teachers in urban centres are university-trained (91 per cent), whereas only about two-thirds of those in rural areas are. Therefore, not only are rural populations in Yunnan disadvantaged in terms of gaining access to senior secondary schooling, they are also disadvantaged in terms of the training and background of their teachers at that level of schooling.

### *Resources*

Funding is a key area of consideration in relation to expanding school systems. Compared with other nations, the funding of education in China is not sufficient to deliver mass systems. According to available statistics, in 1999, the amount of government education funding measured in terms of GDP was 2.1 per cent, a level well below that of OECD countries such as the United States (5.2 per cent) and the United Kingdom (4.7 per cent) and the average across OECD countries (5.2 per cent) (UNESCO 2002). Substantially increased funding will be required to support the programs of construction, capital works and teacher recruitment needed to extend senior secondary schooling to the broad population. This is not a simple matter in a country that, while experiencing rapid economic growth, still has limited resources available for funding social services such as education.

Inadequate funding to date has limited the expansion of senior secondary schooling. In 1999, it was stated in the "Decision on Deepening the Education Reform and Advancing a Comprehensive Quality Education" (The Chinese Communist Party and State Council 1999), that educational allocations from the central government were mainly to be used to ensure the provision of compulsory education. Post-compulsory schooling is largely funded through local government budgetary resources plus tuition fees. Budgetary priority at the local government level is given to compulsory education. Senior secondary education is more dependent on tuition fees (as well as government funding), which works against broad access.

Privatisation has been viewed as a potential solution to the problem of increasing levels of participation in senior secondary schooling, by encouraging private resources for the building and management of more schools. By 1996, there were over 60,000 private schools in China enrolling more than 6.8 million students (Cheng and DeLany 1999). The establishment of new private schools is being encouraged as a way of helping address the shortage of school provision. The central government has maintained some regulatory control over this option. It has introduced three criteria for the provision and organisation of private post-compulsory education. They are that (1) minimum scores on exams required for entry cannot be lower than the lowest scores of students currently enrolled, (2) class sizes cannot exceed that prescribed by the government, and (3) fees are to be set by the government.

It is not only the levels of overall funding that need to be considered in looking at what is required to support further development. Currently, resources are provided very unevenly across provinces and areas within provinces. At a national level, economic development has taken place at a very uneven rate, with large disparities between provinces in the east of China, in the middle, and the west. This disparity is linked to the levels of urbanisation and the proportions of the population in rural and remote areas. Figures from 2004 show that per capita funding at the primary school level was highest in the most densely populated cities (e.g. Shanghai 5,429 Yuan per student), and lowest in the most remote parts (e.g. Yunnan, 1,157 Yuan). At the junior secondary level, similar gaps exist: 5,997 Yuan per student in Shanghai and 1,284 Yuan in Yunnan.

The disparity among the regions in the development of education has promoted differences in rates of progress towards universalisation of schooling. Advanced urban centres, such as Shanghai, are close to realising mass senior secondary education with over 80 per cent of junior secondary school graduates advancing to senior secondary schools. This is compared to only 33 per cent in Yunnan. While some of the advanced urban areas are engaged in the expansion of tertiary education as the new frontier for development, largely rural areas such as Yunnan are still trying to retain students until the end of junior secondary. Regional disparities contribute to large disparities in educational opportunity.

Wang (2000) has noted that disparities among the regions in education development and funds have also helped produce regional disparities in quality of education. Two different pictures emerge. One is of the modern urban school, with quality teachers, spacious school buildings and well-equipped classrooms with sufficient instructional materials, facilities and books. The other picture is of small rural schools, with limited resources, poorly-qualified teachers, larger numbers of dilapidated buildings, and classrooms in need of basic equipment and books (Wang 2000).

The rural and urban disparities in funding and resources produce large differences within provinces such as Yunnan. According to official estimates, teaching in the primary and junior secondary schools in the rural areas of Yunnan occurs much more often in dilapidated buildings (measured as a percentage of building space) than does teaching in urban centres. For example, the estimate for junior secondary schools was 10.4 per cent of floor space in rural areas in 2004 and 4.2 per cent in urban centres (Ministry of Education 2005). At senior secondary school level, while there are far fewer schools in rural areas, of those that operate 6.6 per cent of floor-space is described as dilapidated compared with 1.4 per cent of school buildings located in urban areas.

Facilities, equipment and conditions in rural, provincial (county) city and town and urban schools are strikingly different. Equipment and materials such as computers, for example, are unevenly provided. In 2004, in senior secondary schools located in urban centres, there was on average one computer (PC) per eight students (see Figure 15.10). In provincial (county) city & township schools, as well as in rural schools, the rate was one for every 14 students. The situation in junior secondary general schools was worse, with one computer for every 34 students in



urban schools, one for every 71 students in county city & town schools and one per 95 students in rural schools.

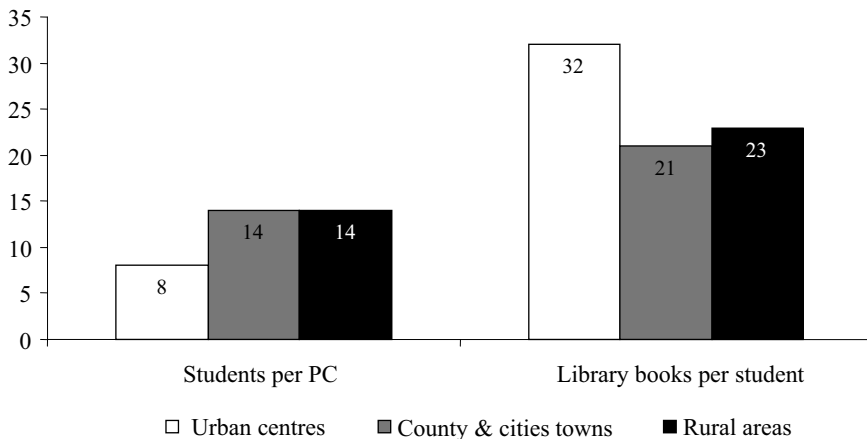


Figure 15.10: Computing and Library Book Resources in Senior Secondary Schools, by Region: Students per PC and Library Books per Student

Source: Ministry of Education (2005)

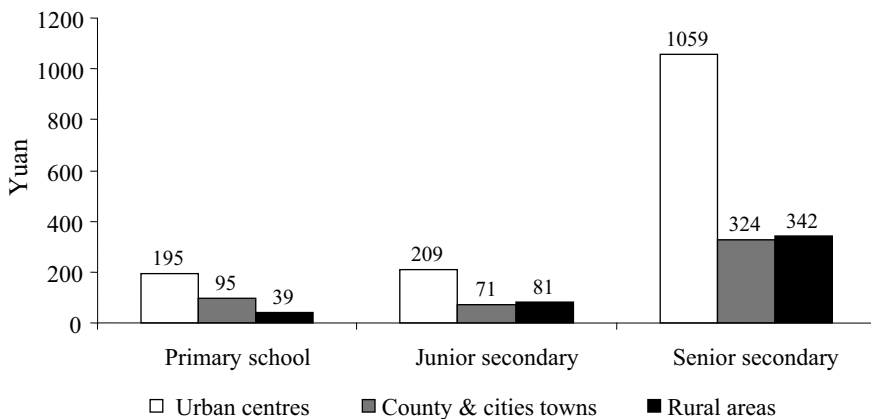


Figure 15.11: Per Capita Funding Allocated for Teaching Equipment and Instructional Materials (Yuan)

Source: Ministry of Education (2005)

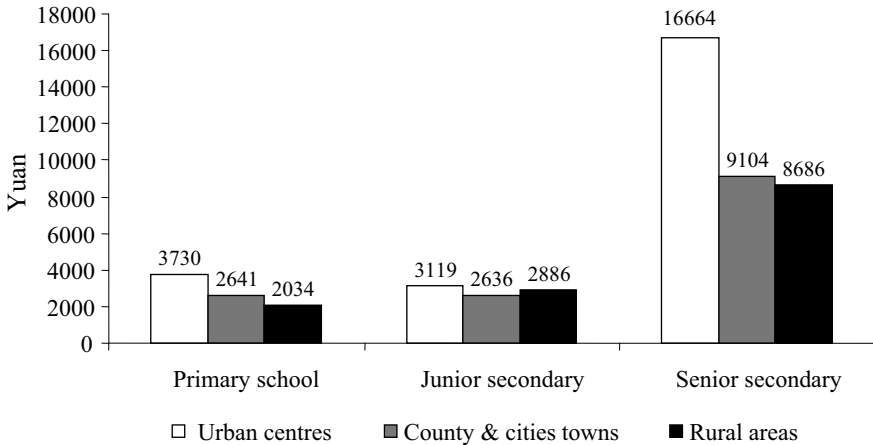


Figure 15.12: Average Per Capita Value of Total Fixed Assets (Yuan)

There are also differences in other resources such as library facilities including books. The number of library books per students is much higher in urban schools than in schools located in rural areas (see Figure 15.10). This is also true of teaching equipment and instructional materials as well as the value of fixed assets. Figure 15.11 shows that the per capita value of teaching equipment and instructional materials can be as much as five times lower in rural schools compared to urban schools (primary schools). Even at senior secondary level, where the numbers of schools in rural areas are restricted, the average per capita value of teaching resources is more than three times lower than that for urban schools. Regional differences are also evident in estimates of the per capita value of total fixed assets. These suggest that there are large disparities not only in absolute provision of schooling but also in the quality of education that is delivered. Such disparities work against promoting higher levels of participation, particularly in the post-compulsory years.

#### *Gender differences*

Gender differences have been a major feature of schooling in Yunnan, particularly in the senior secondary years. Table 15.1 shows that in 1972, the percentage of students in the general (academic) senior secondary schools was only 34.3 per cent. In specialised schools at that time the rate was only 28.5 per cent. Far fewer girls than boys participated in senior schooling in the 1970s and 1980s. At that time, gender differences were a major barrier to achieving mass participation.

*Table 15.1: Gender Differences in Enrolments: Percentage of Girls in Senior Secondary Schools, Yunnan*

Type of school	Year	Total enrolment	Females (%)
<i>Secondary Specialised Schools</i>	1972	12152	28.5
	1982	33106	33.3
	1992	77511	42.8
	2004	271485	51.7
<i>Secondary General Schools</i>	1972	468282	34.3
	1982	838304	39.4
	1992	1316643	42.5
	2004	2350637	46.8
<i>Vocational Schools</i>	1978	3896	30.2
	1982	7183	34.0
	1992	102601	43.8
	2004	107813	46.6
<i>Skilled Workers' Schools</i>	1998	44993	34.4
	2003	30434	34.4
<i>All schools</i>	1982	878593	39.1
	1992	1496755	42.6
	2004	2760369	46.8

Data Source: Yunnan Education 50 Years (Yunnan Education Bureau, 2002)

Today, however, the situation is different. The under-representation of girls has not endured. Huge gains have been made over the last 20 years. In 2004, over half of the students in senior secondary specialised schools were girls. The proportion in secondary general schools (46.8 per cent) and vocational schools (46.6 per cent) are not much lower than the proportion of girls in the relevant school-age population (47.2 per cent). The gaps for Skilled Workers' Schools remain an issue, though the overall rate for upper secondary schooling (46.8 per cent in 2004) is marginally lower than the population percentage. In terms of broad participation, gender differences no longer represent the source of inequality they once were.

## CONCLUSION

In school systems with low participation and completion rates, crude indicators of educational progress are sufficient as measures of performance. Therefore, in a developing nation such as China, with a secondary school system that continues to serve a minority, progress and productivity can be measured using such crude indicators as participation at different levels of schooling, progression rates from one level of schooling to another, attainment levels and literacy rates.

Such measures reveal that 50 years ago, schools in provinces such as Yunnan formed an elite preparatory system serving a minority of the population even at the most basic levels of schooling. Over the next five decades, universal primary schooling was achieved through the establishment of a large system of schools in the most rural and remote parts of the province, where the population is largely based. Promotion rates to junior secondary schooling also increased dramatically, with that level of schooling now operating as a mass system. Junior secondary schools are devoted largely to the education of the broad population for work and life as well as preparing a minority for senior secondary education. Junior secondary schools now operate as a mass terminal system with the majority of students exiting school at the end of this stage of schooling.

Rates of participation in senior secondary schooling reveal that, while progress has been made, this level of schooling remains a system serving only a minority of the population. Schools are not widely distributed, with rural and remote areas, which have the lowest rates of participation, also having the poorest levels of provision. Participation involves less than 40 per cent of young people. Rural and urban differences in provision and participation are large and work against the achievement of a mass system. The transformation of this level of schooling into a mass system will take considerable effort. Some progress has been made. To expand this level of schooling, the curriculum has been diversified. However, rather than through a comprehensive model providing academic and vocational programs in a single school setting, the school system has been divided along program lines with some schools delivering vocational programs and others delivering general academic programs. The establishment of program diversity is essential both to accommodate the diversity in the population as well as serve the interests of economic growth and the provision of work-specific skills and training. The major challenge remains to expand provision and recruit and train the teaching workforce in communities where families have made limited use of school due to economic pressures and a lack of history and experience in the highest levels of schooling.

As progress is made towards a mass system, so that all phases of school operate as a mass system, the crude measures of participation that work well now as indicators of progress will no longer be adequate to measure performance and productivity. In western societies, such as the United States, Australia and France, which are marked by largely universal systems of primary and secondary schooling, progress and productivity now tend to be measured more often through quality and equity in levels of student achievement and outcomes. Similarly, as progress is made in Yunnan towards the transformation of schooling to a universal system there will be increasing need for indicators which measure the quality of student learning and student outcomes rather than just the quantity.

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## Index of Names

- Aasen, P, 128, 129, 130, 131,  
132, 134  
Acker, S, 243  
Ainley, J, 230, 277  
Alexander, K, 28  
Alexander, R, 247  
Allen, M, 271  
Alloway, N, 272, 283  
Alston, M, 273  
Anderson, D, 39, 42  
Apple, M, 139  
Archer, L, 253, 261  
Argy, F, 40  
Armor, D, 22, 24  
Arnot, M, 207, 208, 212, 213, 214,  
217, 218, 219, 222, 223, 227, 243,  
245, 247, 248  
Aungles, P, 39
- Bacher, F, 2  
Baldwin, G, 277  
Ball, S, 63, 64, 67, 68, 70, 71, 76,  
215, 264  
Bankston, C, 24  
Baranov, A, 148  
Barber, B, 78  
Barlow, J, 73  
Baron-Cohen, S, 260  
Baudrillard, J, 63  
Baume, P, 40  
Beck, J, 243  
Beck, U, 224  
Becker, G, 93  
Beddis, R, 243  
Béguin, A, 230  
Berends, M, 23  
Bernstein, B, 73, 77  
Biddulph, S, 255  
Blalock, H, 189  
Bleach, K, 256  
Boado, M, 186, 199, 200  
Borland, J, 40
- Bosker, R, 187, 230, 235, 238  
Boudon, R, 18  
Bourdieu, P, 1, 10, 11, 19, 43, 47,  
59, 60, 64, 66, 67, 70, 71, 73, 74,  
77, 188, 223, 230  
Bowe, R, 70  
Bowles, S, 230  
Bradford, M, 252  
Bradford, W, 256  
Brantlinger, E, 78  
Breed, A, 22  
Brehony, K, 248  
Brophy, J, 15  
Brown, P, 264  
Brown, S, 37  
Bryk, A, 184, 186, 187, 189  
Butler, T, 64, 65, 68, 73, 74, 76, 80  
Byers, S, 245
- Caille, J, 3, 4, 7  
Caldas, S, 24  
Calero, J, 111, 117, 121  
Campbell, D, 188  
Carrington, B, 255  
Cartwright, F, 271  
Cenzipur, D, 33  
Chambers, M, 22  
Charlesworth, S, 70  
Checchi, D, 104  
Cheng, H, 308  
Cheung, S, 230  
Chitty, C, 243  
Clarke, K, 284  
Clowes, D, 43  
Coffield, F, 255  
Cohen, M, 247  
Cole, M, 252  
Coleman, J, 24, 230  
Connell, R, 211  
Connolly, P, 245, 252, 256, 261  
Cook, T, 22, 190  
Cooper, P, 255

- Cresswell, J, 271, 282, 284  
 Crompton, R, 63  
 Croninger, R, 187  
 Crozier, G, 261  
 Cruddas, L, 220  
  
 Davailon, A, 6, 7  
 David, M, 214, 220, 227  
 Davies, N, 257  
 de Graaf, N, 230  
 de Graaf, P, 230  
 de Saint Martin, M, 47  
 Dekkers, H, 229, 230, 235, 238  
 Delamont, S, 246  
 DeLany, B, 308  
 Demack, S, 261  
 Dillabough, J, 207, 212  
 Djupedal, Ø, 137  
 Dokka, H, 128  
 Driessen, G, 227  
 Dryler, H, 230  
 Dubin, B, 146, 147, 151  
 Duru-Bellat, M, 5, 7, 8, 12, 13, 14,  
     15, 16, 18, 59  
 Dwyer, P, 277  
  
 Eaton, S, 23  
 Eitle, T, 23, 28, 29  
 Elsworth, G, 230  
 Elwood, J, 255  
 Entwistle, D, 28  
 Epstein, D, 218, 254, 256  
 Eriksen, T, 136  
 Erikson, R, 118  
 Esping-Andersen, G, 129, 130, 140  
 Euriat, M, 10  
 Everitt, B, 26  
  
 Felouzis, G, 13  
 Fernández, T, 182, 186, 189,  
     199, 200  
 Ferrer, G, 182  
 Filgueira, C, 178  
 Fitzgerald, M, 247  
 Flake, F, 22  
 Forbes, I, 219  
  
 Forsé, M, 18  
 Francis, B, 243, 246, 253, 255,  
     256, 257, 261  
 Friedman, B, 124  
 Frosh, S, 218, 256  
 Fuller, H, 22  
 Furlong, A, 252  
 Furre, B, 130, 132  
  
 Gaillard, F, 22  
 Gallagher, A, 247  
 Gamoran, A, 22  
 Gasperoni, G, 96, 100  
 Geake, J, 255  
 Gerber, T, 144  
 Gewirtz, S, 70, 261  
 Giddens, A, 78  
 Gillborn, D, 217, 221, 248, 252, 261  
 Gintis, H, 230  
 Gipps, C, 255  
 Glommi, G, 105  
 Goldstein, H, 232, 248, 262  
 Goldthorpe, J, 63, 118  
 González, M, 125  
 Good, T, 13, 15, 102, 105  
 Gorard, S, 245, 256, 262, 263  
 Gordon, I, 252  
 Gramsci, A, 47  
 Gray, J, 247, 258, 252  
 Greene, W, 191  
 Gregory, B, 40  
 Grisay, A, 12, 13  
 Grissmer, D, 24  
 Gubb, J, 218  
 Gujarati, D, 186  
 Gulson, K, 261  
 Gurian, M, 255  
  
 Haddock, L, 220  
 Hallinan, M, 23  
 Halpin, D, 262  
 Hampshire, S, 81  
 Hannan, G, 245  
 Hargreaves, D, 261  
 Harris, A, 263, 264  
 Hart, S, 243

- Hawley, W, 24  
He, F, 306  
Heckman, J, 113, 124  
Helme, S, 41, 217, 275, 282, 286  
Hernes, G, 130  
Higgs, G, 257  
Hompland, A, 134  
Hooks, B, 215  
Houghton, J, 217  
Hout, M, 144  
Hutchinson, D, 247
- Ivanova, N, 148
- Jackson, C, 255  
James, M, 247  
James, R, 39  
Jarousse, J, 7, 8  
Jencks, C, 230  
Jesson, D, 247, 262  
Johannesson, I, 248  
Johns, S, 289  
Jones, R, 279  
Jones, S, 246  
Jonsson, J, 230  
Jordan, B, 74, 78  
Joseph, 23
- Karmel, P, 39  
Kaufman, R, 183, 184, 185, 190, 193  
Kelly, S, 23  
Kemp, S, 76  
Kent, J., 273  
Kenyon, P, 272  
Kieffer, A, 18  
Kilpatrick, S, 289  
Kjærnsli, M, 135  
Klyucharev, G, 148  
Kofanova, E, 148  
Konstantinovsky, D, 144  
Kornhaber, M, 24, 28, 29  
Kraaykamp, G, 230  
Kreft, I, 26  
Kremenitskaya, I, 147  
Krueger, B, 124
- Kuyper, H, 231  
Kymlicka, W, 78
- Lacey, C, 261  
Lamb, S, 51, 217, 277, 286, 287, 288  
Lee, V, 189  
Leeder, S, 40  
Leroy-Audouin, C, 2  
Lie, S, 135  
Lingard, B, 221, 248, 255  
Ljungmann, B, 137  
Long, M, 277  
Longhurst, B, 64  
Low, S, 73, 74  
Lucas, S, 23  
Lucey, H, 220  
Lukin, V, 148  
Lupton, R, 263, 264
- Mac an Ghaill, M, 223, 228, 255  
Maguire, 215  
Mahony, P, 221, 222, 245, 247  
Majors, R, 248  
Marigold, 73  
Marjoribanks, K, 230  
Marks, G, 274  
Marshall, C, 215  
Martin, M, 227  
Martinez, E, 178  
Martino, W, 255, 256  
Maslen, G, 50  
McDowell, L, 245  
McEwan, P, 189  
McKenzie, E, 77, 277  
Mediås, O, 128, 129, 131  
Melody, J, 220  
Merle, P, 18  
Meuret, D, 14  
Mickelson, R, 22, 23, 26, 28, 31, 35  
Midaglia, C, 182  
Miles, P, 219, 247, 248  
Mills, M, 255, 261  
Mingat, A, 3, 5, 7, 12, 13, 59  
Mirza, H, 212, 217, 221, 252, 261  
Mok, K, 290



- Moriarty, B, 272  
 Morris, C, 22  
 Morris, V, 22  
 Morris, M, 261, 262  
 Muir, M, 23  
 Mullis, I, 227  
 Myers, K, 31, 36, 221, 243, 245  
 Myhill, D, 246  
  
 Nagel, T, 68, 72, 79  
 Nelson, J, 183, 184, 185, 190, 193  
 Nicholas, T, 41, 159  
 Nilsson, I, 135  
 Noble, C, 256  
  
 Oakes, J, 23  
 Olsen, R, 135  
 Olson, L, 28  
 Opheim, V, 142  
 Orfield, G, 23  
 Osler, A, 220  
  
 Pallotta-Chiarolli, M, 255, 256  
 Passeron, J-C, 1, 10, 43, 47, 59,  
     60, 223  
 Patterson, L, 218  
 Phillips, T, 247  
 Phoenix, A, 261  
 Polesel, J, 39, 41, 45, 91, 217, 275,  
     284, 303  
 Popcorn, F, 73  
 Portocarero, L, 118  
 Power, S, 262  
 Pusey, M, 273  
  
 Rabe-Hesketh, S, 26  
 Ranson, S, 263, 264  
 Raphael Reed, L, 220, 221  
 Raudenbush, S, 184, 186, 187  
 Ravela, P, 182  
 Ravikumar, B, 105  
 Ray, C, 22  
 Redley, M, 74, 78  
 Renold, E, 255, 256  
 Reuchlin, M, 2  
 Reynolds, D, 264  
  
 Richardson, G, 132  
 Riskin, C, 295  
 Robson, G, 64, 66, 68, 73, 75, 76,  
     78, 80  
 Roe, A, 135  
 Roschina, Ya, 150  
 Rossell, C, 22, 24  
 Roux S, 6, 7  
 Rudduck, J, 255  
 Rutkevich, M, 144  
 Rutt, S, 261, 262  
  
 Salisbury, J, 256  
 Saunders, P, 40  
 Savage, M, 64, 73  
 Savitskaya, E, 149  
 Sax, L, 255  
 Schagen, I, 247, 262  
 Schagen, S, 247, 262  
 Sedden, T, 72  
 Sejersted, F, 130  
 Seliverstova, I, 153  
 Sewell, T, 218, 261  
 Shadish, W, 188  
 Sheehan, P, 40  
 Shishkin, S, 148, 150  
 Shubkin, V, 143, 144  
 Shujaa, M, 22  
 Simon, B, 243  
 Skelton, C, 243, 246, 255, 256  
 Slagstad, R, 130  
 Smolentseva, A, 153  
 Smith, A, 255  
 Smith, J, 187  
 Smith, S, 22, 35  
 Smyth, J, 290  
 Snidjers, T, 187  
 Solaux, G, 8  
 Solstad, K, 128  
 Somers, M, 189  
 Sommers, C, 255  
 Sorokina, N, 152, 154  
 Stables, A, 245  
 Stanworth, M, 245  
 Stenhouse, L, 243  
 Stiglitz, J, 105

- Stokes, H, 289  
Stone, L, 207  
Sullivan, A, 230
- Taylor, C, 77, 78, 262, 263  
Taylor, H, 210  
Taylor, R, 40  
Teese, R, 1, 39, 40, 43, 44, 45, 58,  
72, 77, 111, 159, 217, 228, 248,  
275, 284, 286  
Telhaug, A, 128, 129, 130, 131,  
133, 135  
Thélot, C, 10  
Thomson, S, 275  
Thrupp, M, 15, 16, 263  
Titaev, K, 149  
Titus, J, 254  
Tjønneland, E, 134  
Tomlinson, S, 263  
Trow, M, 39, 297  
Tsang, M, 298, 299, 301  
Turmo, A, 135  
Tymms, P, 255
- Uerz, D, 230  
Underwood, C, 271, 282, 284
- Vallet, L, 4, 7, 18  
van der Werf, M, 231  
van der Werfhorst, H, 230  
van Houtte, M, 248  
van Langen, A, 227, 229, 230,  
235, 238  
van Zanten, A, 15, 17, 77, 230  
Vasenina, I, 150, 152  
Veikher, A, 147  
Vervoorn, A, 39, 42  
Vickers, M, 287, 288  
Vincent, C, 63, 64, 76, 264
- Vincent, K, 220  
Vinson, A, 283, 288, 289  
Volckmar, N, 132  
Volkoff, V, 284  
Voznesenskaya, E, 150, 151, 152
- Wacquant, L, 64  
Walberg, H, 22, 24  
Walby, S, 250  
Walden, H, 212  
Walden, J, 245  
Walkerdine, V, 212, 221, 223  
Wang, S, 309  
Warren, S, 252  
Warrington, M, 243, 245, 246, 247,  
248, 255, 256, 257, 260, 261, 264  
Weaver-Hightower, M, 221, 248, 255  
Weiner, G, 214, 215, 228, 243, 245  
Welch, A, 272, 290  
Welner, K, 22, 23  
Whyte, J, 243  
Wilkinson, H, 221  
Williams, J, 271, 275  
Williams, R, 73  
Willis, P, 261  
Willms, D, 189  
Wu, T, 39  
Wyn, J, 277  
Wong, Raymond, 144
- Yarrow, A, 283  
Yates, L, 255  
Youdell, D, 248, 261  
Young, M, 230  
Younger, M, 243, 245, 246, 248, 255,  
256, 258, 260
- Zaborovskaya, A, 148, 149,  
150, 152

# Index of Subjects

- ability grouping, 8, 17, 23, 28, 35, 37
- ability streaming. *See* ability grouping
- achievement differences, 157
  - cognitive gap, 58
  - cumulative, 3, 4, 7, 9, 10, 18, 58, 197
  - early childhood, 2
  - immigrant children, 2, 4
  - initial gaps, 11
  - inter-country, 158
  - junior secondary, 5
  - preschool, 2, 3, 4, 7, 155
  - primary school, 3
  - production of social inequalities, 6
  - racial differences, 21
  - regional, 273, 275, 276
  - social origin, 3, 5, 261
  - type of secondary school, 171, 174
- assessment, 12, 46, 47, 48, 52, 58, 123, 132, 152
- Australia, 271-294
- baccalaureat, 4, 6, 7, 8, 9, 18, 115, 122, 124
- Brown v. Board of Education, 21, 35, 37
- busing, 22
- capital
  - academic, 7, 46
  - cultural, 15, 59, 75, 77, 93, 133, 188, 189, 196, 204, 205, 241, 249, 290
  - economic, 75
  - social, 65, 73, 76, 216, 221, 223, 264, 266, 289
- childcare, 63, 64, 65, 66, 67, 73, 74, 75, 76, 79, 219
- China, 295-318
- classroom
  - effects, 13
- compulsory schooling, 3, 18, 43, 58, 59, 87, 89, 90, 93, 103, 111-123, 128, 130-133, 138, 140, 141, 143, 158, 177, 209, 218, 243, 278, 293, 299, 301, 308
- cultural demands, 47
- curriculum
  - choice, 5
  - competitive nature, 47
  - heirarchy, 50
  - placement, 4, 12
  - subject options, 5
  - vehicle of social differentiation, 43
- death of class*, 59
- democratisation, 18, 19, 123, 124
- early leaving. *See* school completion
- educational reform, 5, 21, 24, 58, 61, 93, 100, 114, 121, 122, 132, 136, 140, 152, 163, 164, 177-179, 184-189, 192, 193, 199, 200, 207-210, 214, 301, 314
- gender reform, 211, 213, 222, 224
- impact, 184, 187, 192, 199, 262
- market-based reforms, 290
- England, 66, 125, 207-226, 243, 244, 248, 250-254, 259, 261, 262, 263, 265, 266, 267
- equity programs
  - Priority Schools Funding Program, 283
  - rural programs, 271, 285, 292
- exclusion, 113, 152, 212, 220, 222, 225, 269
- family
  - background, 240
  - choice of school, 51
  - strategies, 11, 16, 17, 63, 264

- feminism, 207-210, 212, 213, 215, 216, 222, 223
- funding, 48, 60, 112, 145, 146, 149, 153, 178, 209, 263, 281, 283  
subsidies for private schools, 114
- gender differences, 196, 207, 250, 265, 269, 311, 312  
achievement, 197, 218, 227, 229, 235, 236, 238, 240, 245, 247, 248, 255, 256, 258, 260  
course choices, 228  
subject choices, 213, 246  
school participation, 311
- gender equity. *See* gender differences
- gender identity, 218, 224-256
- geographical inequalities, 12, 144, 271, 295, 304, 306, 309
- giftedness, 24, 27, 28, 29, 36
- globalisation, 216, 219, 265
- higher education, 4, 7-10, 18, 39-42, 52-65, 87, 90, 93, 99, 100, 104-109, 114, 120-124, 131, 133, 139-156, 162-165, 174, 177, 208-224, 227-240, 245, 246, 266, 271, 277, 279, 286-288, 292, 297, 298, 299, 302  
France, 1-20  
qualifications, 157  
social differentiation, 52  
social intake, 9  
streams, 10
- immigrants, 3, 4, 7, 111-115, 119, 120, 123
- indigenous, 181, 183, 272, 274, 276, 280, 282, 287, 290
- International Baccalaureate, 24, 33
- Italy, 89-110, 157-176,
- labour market, 39, 42, 100, 107, 109, 117, 139
- Latin, 5, 8, 114, 128
- league tables, 138, 214, 248, 263, 267
- Learning, 126, 187, 190, 225, 241, 242, 265, 267, 269, 270, 278, 293
- mass schooling, 39, 127, 177, 295, 296, 298, 299, 301, 303, 304, 306, 309, 313
- middle-class, 46, 60, 63, 64, 65, 68, 69, 70, 71, 72, 74, 76, 78, 111, 115, 182, 208, 214, 217, 222
- Native Americans, 23
- Norway, 127-142
- policy, 123, 125, 127, 129, 130, 134-139, 200, 207, 214, 215, 221, 223, 243, 261, 266, 267, 293  
market-based reforms, 178, 217, 261
- post-compulsory education, 7, 8, 40, 44, 48, 58, 93, 96, 111-124, 131, 140, 141, 157, 158, 162, 165, 174, 177, 227, 229, 230-232, 245, 246, 279, 281, 287, 289, 295, 296, 301-304, 308, 311, 312
- pre-school, 3, 10, 80, 111-113, 124, 125, 145, 153, 155, 190, 204
- Privatisation, 66, 73, 138, 263, 308
- pupil mix, 13, 50, 77  
pupil diversity, 50  
racial composition, 28  
social and cultural mix, 48
- region, xv, 49, 109, 111, 112, 115, 119, 120, 122, 125, 133, 139, 143, 145, 152, 158, 161, 162, 163, 166, 169, 177, 181, 183, 184, 188, 189, 200, 214, 249, 271, 272, 274, 276, 278, 279, 280, 281, 282, 283, 284, 285, 289, 290, 291, 292, 293, 295, 304, 308
- relegation, 14, 42, 54, 124
- reproduction, 1, 18, 21, 43, 58, 61, 68, 72, 75, 127, 156, 212, 230, 241, 242

- residential segregation, 12 *see also*  
geographical inequalities
- Russia, 143-156
- school
- academic high schools, 100, 107, 166, 169-171
  - Catholic, 48
  - climate, 12, 14, 16, 104, 172-174, 260
  - context, 11, 12
  - effectiveness, 15, 138, 252, 264
  - improvement, 111, 263, 264, 267
  - intake, 12, 13, 15, 53, 55, 56, 138, 173, 211, 258, 286, 287
  - magnet schools, 27
  - primary, 2, 3, 4, 7, 11-14, 58, 70, 71, 72, 74, 89, 94, 98, 103, 119, 140, 159, 170, 177-206, 211, 227, 255, 260, 268, 281, 286, 295-309
  - private non-Catholic, 48-50
  - private schools, 17, 48, 51, 57, 66, 71, 72, 74, 105, 107-109, 113, 114, 120, 123, 130, 133, 138-140, 178, 181, 183, 186, 187, 191, 196, 197, 199, 202, 308
  - public, 17, 21-23, 35, 40, 48-52, 57, 65, 71, 73, 76-78, 105-115, 120-124, 128-130, 132-134, 136, 139, 141, 145, 153, 177-179, 183-189, 191, 193, 194, 196-199, 208, 214, 247, 290, 314
  - rural, 122, 144, 151, 152, 271, 281, 289, 290, 304, 306, 309, 310, 311, 309
  - size, 50, 172, 274, 276, 281, 282, 287, 306
  - specialist, 262, 263, 267, 268, 302
  - systems, 22, 24, 29, 34, 35, 37, 39, 40, 42, 48, 54, 56, 58, 99, 111, 128, 129, 131, 132, 135, 162, 174, 177, 216, 295, 296-298, 301, 304, 313
  - technical schools, 99-102, 107, 166, 171, 301
  - urban, 144, 151, 181, 242, 271, 273, 290, 310, 311
- school completion, 39, 40, 42, 94, 124, 157, 158, 161, 164, 274, 288
- regional differences, 273-276, 287
- school subjects, 6, 24, 43, 45-47, 50, 52, 58, 131, 132, 137
- hard subjects, 46
  - sites of competition, 45
- segregation, 21, 23, 26, 28, 29, 33-37, 43, 48, 56, 100, 109, 115
- academic achievement, 23
  - achievement effects, 26
  - desegregation, 21-25, 28-30, 33, 34, 35, 37
  - resegregation, 23-25, 29, 35
- self-selection, 6, 9, 18, 46, 55, 99, 104, 108, 109, 110
- single-sex education, 209, 211, 212, 269
- social mobility, 18, 93, 140, 146
- Spain, 111-126
- special education, 24, 28, 29
- student body, 13, 15, 24, 112, 174, 186
- peer effects, 15, 104-106, 108, 109
- teacher
- expectations, 12, 13, 14, 15, 61
  - judgement, 29, 113, 135
  - qualifications, 58, 307, 308
  - supply, 14, 283, 306
  - turnover, 283
- tertiary education, 8, 40, 42, 54, 90, 93, 111, 148, 162, 228, 230, 231, 235, 240, 242
- TAFE institutes, 54
- tracking, 6, 8, 23, 24, 26, 28, 29, 33-37, 43, 52, 89, 99, 108
- effects on achievement, 26
  - track placement, 6, 7, 28, 29, 33, 34, 43
- transition from school, 40, 284
- post-school destinations, 42
  - regional differences, 276, 277

- United Kingdom, 92, 116, 118, 228,  
237, 239, 253, 262, 308
- United States, 21, 23, 227, 228, 237,  
239, 248, 271, 295, 308
- Uruguay, 177-206
- vocational education and training, 4,  
6-8, 40, 41, 43, 53, 90, 91, 99, 105,  
107, 108, 112, 116, 119, 121-124,  
131, 143, 145, 146, 151, 152, 155,  
162, 166, 169-171, 179, 219, 243,  
277-280, 284-290, 292, 293, 298,  
300-303, 312-314
- regional differences, 278
- vouchers, 22, 99, 109, 152
- welfare state, 78, 125, 129, 130,  
135, 221
- zoning, 12, 16, 48

# International Studies in Educational Inequality, Theory and Policy

This is the third volume of a set of three. The titles of the other volumes are:  
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Inequality in Education Systems. These volumes together form the work  
International Studies and Educational Inequality, Theory and Policy, edited  
by Richard Teese, Stephen Lamb and Marie Duru-Bellat.



# International Studies in Educational Inequality, Theory and Policy

Volume Three

Inequality: Educational Theory and Public Policy

*Edited by*

Richard Teese

Stephen Lamb

Marie Duru-Bellat

*With the assistance of Sue Helme*



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## VOLUME THREE

### TABLE OF CONTENTS

List of Tables	vii
List of Figures	ix
List of Contributors	xi
List of Abbreviations and Acronyms	xv
Acknowledgements	xvii
Foreword	xix
1 School Reform and Inequality in Urban Australia: A Case of Residualising the Poor <i>Stephen Lamb</i>	1
2 Education Markets and Social Class Inequality: A Comparison of Trends in England, Scotland and Wales <i>Linda Croxford and David Raffe</i>	39
3 The Effects of Generalised School Choice on Achievement and Stratification: Evidence from Chile's Voucher Program <i>Chang-Tai Hsieh and Miguel Urquiola</i>	67
4 Taking Local Contexts More Seriously: The Challenge for Education Research, Policy and Practice <i>Ruth Lupton and Martin Thrupp</i>	109
5 Understanding and Addressing Achievement Gaps During the First Four Years of School in the United States <i>Russell W. Rumberger and Brenda Arellano</i>	129
6 The Development of Vocational Programs in Secondary Schools: Victoria and the European Tradition <i>John Polesel</i>	151
7 Reducing Inequality in an Age of Student Mobility Challenges Facing American Higher Education <i>Sara Goldrick-Rab</i>	169
8 Equality and Policy: Challenges Faced by China's Education <i>Yufeng Liu and Veronica Volkoff</i>	185
9 Walking The Tightrope: Equity and Growth in a Liberalising India <i>Sangeeta G. Kamat</i>	207

10	Making Education More Equitable: What Can Policy Makers Learn from the Australian Disadvantaged Schools Programme? <i>Pat Thomson</i>	239
11	Educational Inequality in the Netherlands: Policy, Practice and Effects <i>Geert Driessen and Hetty Dekkers</i>	257
12	What Makes for Fair Schooling? <i>François Dubet and Marie Duru-Bellat</i>	275
13	Social Inequalities in Education: Enlarging the Scope of Public Policy Through Reflection on Context <i>Richard Teese and Stephen Lamb</i>	293
	Index of Names	309
	Index of Subjects	315

## LIST OF TABLES

1.1	Enrolment Shares by School Sector: Secondary School Students, Victoria, 1984 to 2004 (%)	15
1.2	General Achievement Profile of Students in Northern Melbourne, by Location of School Attended	23
1.3	Distributions of Disadvantaged Students, by SES Quintile: Melbourne Schools, 2004 (%)	24
1.4	Multi-level Modelling Regression Estimates of Year 12 Achievement (mean VCE scores)	27
1.5	Standardised OLS Regression Estimates of Year 5 Mean School Achievement: Primary Schools, Melbourne, 2004	31
2.1	Estimated Difference in Achievement at Age 16 by Cohort, Gender and Social Class among Comprehensive-School Students in each Home Country	51
2.2	Estimated Changes over Time in Attainment at Age 16 by Gender, Social Class and Home Country, in Comprehensive Schools and All Schools	54
2.3	Estimated School Differences in Attainment at Age 16, in Comprehensive Schools in each Home Country	58
3.1	Explaining the Private Sector's Growth, 1982-1988	74
3.2	Descriptive Statistics at the Commune Level	79
3.3	OLS Regressions for Achievement, 1982-1988 and 1982-1996	83
3.4	IV Regressions for Achievement, 1982-1988	86
3.5	Sorting Among Communes, 1990s Cross-section and 1982-1988 Changes	94
3.6	IV Regressions for Sorting, 1982-1988	98
3.7	Data Sources	103
3.8	Reduced Form Regressions for Achievement, 1982-1988	104
3.9	Reduced Form Regressions for Sorting, 1982-1988	105
5.1	Selected Predictors of Reading and Mathematics Achievement and Learning	142
8.1	Per-student Educational Expenditure for Primary and Lower Secondary Education in China, 1989-2000 (RMB-Yuan per student)	188
8.2	Senior Secondary School Resources, Per Student (2004)	194
8.3	Education Funding Allocation, per Student, in RMB-Yuan, 2004	196
9.1	Distribution of Labour Force by Sector	212
9.2	Gender Disparities in Literacy in Four States	220
9.3	Share in Gross Domestic Product by Sector	232
11.1	Effect sizes for language, reading and mathematics achievement according to social-ethnic background of pupils	270
11.2	Percentage of pupils experiencing delays in primary school according to social-ethnic background	270

11.3	Percentage of pupils with recommendation to prepare for a professional education or higher according to social-ethnic background	271
11.4	Percentage of pupils completing different levels of secondary education according to ethnic background	271

## LIST OF FIGURES

1.1	Commonwealth Government Recurrent Expenditure on Government and Private Schools: 1995-2004 (\$'000,000)	7
1.2	Changes in Mean School Enrolments, 1980-2004: Primary and Secondary Schools, Melbourne	11
1.3	Changes in Mean School Enrolments 1980-2004, by SES (quintile): Secondary Schools, Melbourne	14
1.4	Changes in Mean School Enrolments and School-age Population, 1980-2004: High and Low SES Secondary Schools Compared, Melbourne	16
1.5	Changes in Mean School Enrolments, 1980-2004, by SES: Melbourne Secondary Schools with Enrolments in Every Year	19
1.6	Changes in Mean School Enrolments 1980-2004, by SES (quintile): Primary Schools, Melbourne	20
1.7	Number of VCE Units Provided, by Year 12 VCE Enrolments: Schools, 2004	34
2.1	Education Markets in England, Scotland and Wales in the 1980s and 1990s	44
2.2	Cohorts	47
2.3	Average Achievement Score at 16, by Country and Social Class	49
3.1	National Enrolment Shares by Sector, 1970-1996.	72
3.2	Private Enrolment among Communes	73
3.3	Number of Schools by Sector, 1980-1995.	75
3.4	Chile's Performance in International Tests, 1970 and 1999	91
3.5	Average Test Score Among Municipal and Voucher Schools, Relative to Tuition-Charging Private Schools, 1982 and 1996	92
5.1	Achievement and Learning Gaps in Reading and Mathematics, 'White-Black' and 'White-Hispanic', Fall Kindergarten through Third Grades	136
5.2	Achievement Gaps in Reading and Mathematics, 'White-Black' and 'White-Hispanic', Fall Kindergarten and Spring Third Grades (ECLS), Winter Fourth Grade and Winter Eighth Grades (NAEP)	137
5.3	Reductions in Reading and Mathematics Achievement and Learning Gaps, 'White-Black' and 'White-Hispanic'	139
6.1	Participation in Senior Secondary School Vocational Programs, Victoria, Australia, 2004, by SES	161
6.2	Mean Participation in Senior Secondary School Vocational Programs & Mean SEIFA Values of Metropolitan Regions, Victoria, Australia, 2004	162
6.3	Participation in Senior Secondary School Vocational Programs, Victoria, Australia, by SES and School Sector, 2004	163
7.1	Effects of Socioeconomic Background on Log Odds of Student Mobility	175

7.2	Effects of Student Mobility Patterns on Log Odds of bachelor's Degree Completion	177
7.3	Effect of College change on the Predicted Probability of Bachelor's Degree Completion	178
7.4	Effect of College Change on the Predicted Probability of Bachelor's Degree Completion	178
7.5	Flowchart of Path-dependence in Postsecondary Enrolment	180
8.1	Human Development Index for Selected China Provinces and Comparison Countries, 2003	186
8.2	Net Enrolment Ratios for Primary and Gross Enrolment Rates for Junior-Secondary, Senior-Secondary and Higher Education, 1980 to 2004	192
8.3	Percentage of Dilapidated Buildings to Floor Space of General Senior Secondary Schools in Urban, Country and Town and Rural Areas	193
8.4	Percentage of School Buildings in Vocational High Schools (VHS) that are Dilapidated, by Province, 2003	195
8.5	Percentage of Illiterate and Semi-Illiterate People of Adult Population, by Selected Regions	197
8.6	Participation in Kindergarten and Primary School, by Gender, 1990-2004	198
8.7	Female Participation in General Secondary School, Secondary Vocational School and Regular Higher Education, by Year, 1989-2004	198
8.8	Illiterate and Semi-Illiterate Population <sup>83</sup> Aged 15 and Over, by Gender, 1998-2004	199
9.1	Adult (15 years and over) Literacy Rates	208
9.2	Trends in Education Expenditure	214
13.1	Reaching Final Year of Upper Secondary Education, Victoria 1967-2005	295
13.2	Age-cohort Reaching Final Year of Secondary School and Studying Chemistry or Physics, Victoria, 1947-1998	296



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## LIST OF ABBREVIATIONS AND ACRONYMS

ARR	apparent retention rate
CDEP	Community Development Employment Programs
CEDEAO	Communauté Economique des Etats de l’Afrique de l’Ouest
DfES	Department for Education and Skills
EAL	English as an additional language
ECLAC	Economic Commission for Latin America and the Caribbean
EDGDP	public education spending as share of GDP
EEO	<i>Equality of Educational Opportunity</i> (the Coleman Report)
ESRC	Economic and Social Research Council
FSM	Free School Meals
GCE	General Certificate of Education
GCSE	General Certificate of Secondary Education
HEFCE	Higher Education Council Funding for England
HESA	Higher Education Statistics Agency
HSB	High School and Beyond survey
IADB	Inter-American Development Bank
IDA	International Development Association
IIEP	International Institute for Educational Planning
IMF	International Monetary Fund
IRT	Item Response Theory
MCEETYA	Ministerial Council on Education, Employment and Youth Affairs
MICS	Multiple Index Cluster Surveys
NAEP	National Assessment of Educational Progress
NEET	<i>Not being in Education, Employment or Training</i>
NCER	National Center for Education Statistics
NCLB	No Child left Behind
NELS	National Education Longitudinal Study
NLS	National Literacy Strategy
NLSY	National Longitudinal Survey of Youth
OECD	Organization for Economic Co-operation and Development
OFSTED	Office for Standards in Education
OREALC	UNESCO Regional Office for Latin America and the Caribbean
PCI	per capita income
PEIR	Primer Estudio Internacional Comparativo
PISA	Program for International Student Assessment
PREAL	Programa de Promoción de la Reforma Educativa en América
PROGRESA	Programa de Educación, Salud y Alimentación

RAND	RAND Corporation
SEI	Duncan <i>Socioeconomic Index for Occupations</i>
SES	socio-economic status
SLE	School Life Expectancy
TAFE	Technical and Further Education
TIMSS	Third International Mathematics and Science Study
UN	United Nations
UNDP	United Nations Development Program
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
VET	vocational education and training
WHO	World Health Organization

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### *Translators*

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## FOREWORD

In this volume, the editors present a series of studies with a policy emphasis. The studies differ widely in their areas of interest. Some examine the impact in equity terms of ‘choice’ policies, such as vouchers. Others are concerned more broadly with the operation of market policies, including freeing parents of zone restrictions, freeing schools to focus on different segments of local markets (e.g., through specialization or selective-intake policies), and freeing school principals to exercise wider administrative powers at the expense of educational bureaucracies.

The studies included in this volume also differ in terms of the levels of education systems with which they deal. In some, the focus is on the early years of schooling—often considered decisive for tackling the social gaps in achievement which progressively widen after these years. But policy-makers also need to look beyond these years, including tackling the nature of upper secondary education—often considered too late for effective policy intervention to reduce achievement gaps. Higher education, too, needs to be seen as part of a wider picture of social inequality which, in some countries, seems to be almost fully played out before this level of education is reached, while in other countries higher education continues to display the effects of social origin and these tend to accumulate.

If each level of education presents distinctive policy challenges, a view of the whole scene is essential if policy priorities are to be set and linkages recognized. Several of the studies in this volume attempt a global analysis of the challenges facing rapidly growing countries in Asia. Other studies look back over decades of reform in developed countries, seeking to contextualize the reform effort and draw lessons.

The final studies in this volume review the issues of equity as a goal and inequality as an object of public policy. What can we reasonably aim at, given the trade-offs between equity and merit? Where should the emphasis lie? On the other hand, given our theoretical understanding of the origins of inequality, what is the scope of policy intervention, what is the way forward?



# 1 School Reform and Inequality in Urban Australia

## A Case of Residualising the Poor

*Stephen Lamb*

### INTRODUCTION

Over the past three decades, government schools in Australia have been exposed to the effects of several major public policy reforms aimed at improving school performance. One is the well-documented push to *marketisation* or the re-organisation of school management around ‘market’ principles (see, for example, Whitty, Power & Halpin, 1998). Greater autonomy for schools through devolution of decision making, the introduction of school councils, a focus on school-based management, and the easing of restrictions on school catchment boundaries to enhance parental choice were all initiated with the promise of promoting more effective schools through increased competition. Another is the push to *privatisation* through increasing the levels of public funding to private providers, or what could be described as the public funding of private effort in the delivery of schooling. What is being referred to here is the role and support for private schools, rather than the notion of privatisation that is sometimes used to describe the re-organisation of government schools to promote greater competition. Arguments for the expansion in public funding for private schools focus on the ‘free market’ goal of ensuring diversity and choice (e.g. Nelson, 2004), and the promise of flow-on effects to school performance through increased competition. A third reform is school *rationalisation* where governments have implemented a number of restructuring strategies involving school closures and mergers, particularly of small schools. Smaller schools are viewed as less efficient with higher per capita costs and less capacity to deliver program breadth, limiting the educational opportunities available to students.

Central to the arguments behind these reforms is the view that government schools, like many state-funded services, are burdened by bureaucracy in a way that reduces productivity and output. Instead, government schools need to become more like private schools, which are treated, on this view, as models of efficiency with superior educational outcomes. School provision should operate in a framework of market demand and supply and become subject to the laws of open competition. Essential to this is not only a healthy sector of private schools, but also an active government prepared to intervene by identifying and responding to poorly performing or inefficient schools. Improvements to the quality of teaching and learning in government schools will be gained by allowing parents to choose more

freely between schools, by devolving decision making to local schools, and by ensuring a competitive private school sector which is an important source of choice and diversity.

What have been the effects of the reforms? Given their far-reaching nature and the length of time they have been in place it should be possible to assess whether or not the reforms have delivered on their promise. This chapter aims to contribute to such an evaluation by examining the impact of the reforms on the changing size and composition of schools in Melbourne (capital city of the state of Victoria with a population of 3.6 million in 2004) over the past 25 years and effects on student achievement. It does not attempt to provide a full or comprehensive assessment of the impact of the reforms in the style of systematic program evaluations. Rather it looks at the effects of the reforms on just a couple of elements: their effects on the size of government schools measured through enrolments, and the relationship between school size and student achievement.

This chapter shows that the various reforms have substantially changed the size and composition of government schools. Mean enrolments in both primary and secondary schools fell during the 1980s and grew during the 1990s, partly in response to changes in the size of the school-age population. However, in the late 1980s and early 1990s, following closures and mergers initiated by government, the number of schools fell sharply and mean enrolments rose correspondingly. But the experiences in schools over the whole period varied by social intake. One of main effects of market reforms was to accelerate the growth of middle and high socioeconomic status (SES) government schools which swelled in student numbers under the weight of unregulated demand. At the same time, schools serving low SES areas tended to wither and decay, shedding numbers at a vast rate.

The importance of changes in enrolments is linked in part to a relationship between school size and student achievement. Regression analysis shows that in 1994, when schools were closer in size irrespective of social intake, student achievement was weaker in smaller secondary schools and school size exerted independent effects on student achievement. This was true of small government schools serving high SES communities as well as those serving low SES areas. By 2004, school size had become so associated with social intake that it no longer exerted an effect independent of SES. This does not mean that school size is no longer linked to student achievement. On the contrary, it is likely that the relationship between school size and student achievement remained strong or even intensified. What changed is that the majority of small schools increasingly were those serving low SES communities, thanks to the effects of market reforms. In Melbourne, school size has become an attribute of SES and indistinguishable from it.

At the end of 25 years of reform, schools in the poorer areas of Melbourne had become residualised and were a shadow of their former selves. They had become 'sink' schools, denuded of student numbers and resources, and, thanks to these changes, repositories of academic failure.

The rest of the chapter is organised in the following way. It begins by outlining some of the features and timing of the main policies associated with the adoption of the three areas of reform. The following section looks at the effects of the reforms,

firstly, on the size of schools and how that varies based on social intake and, secondly, on the relationship between school size and student achievement. The final section focuses on the issue of policy and what can be done in the future to address the issue of residualisation that now affects schools serving poor communities in urban areas.

## SCHOOL REFORM

### *Marketisation*

In the past, government schools in Australia were described as systems of highly centralised state education in which basic decisions were made by relatively few people in hierarchically structured bureaucracies that developed and applied uniform policies and regulations to school buildings and facilities, to budgets, to zoning policies and the enforcement of school boundaries, to programs and the curriculum, to teaching methods, to standards of achievement, and to staff recruitment and promotion (see, for example, Butts, 1955; Pusey, 1975). More than 30 years ago these features of school organisation came under attack and were increasingly viewed as barriers to the pursuit of quality and equity in education as schools had little control or capacity to respond to their local context and build community-sensitive forms of provision. Calls and support for the decentralisation of schools through devolution of control and decision making came from a variety of sources including advocates from the left as well as the right.

In 1973 the report by the Interim Committee for the Australian Schools Commission (the *Karmel Report*) argued for the devolution of responsibility to enhance community involvement in the management and control of schools. The Committee argued that a “grass roots approach to the control of schools reflects a conviction that responsibility will be most effectively discharged where the people entrusted with making decisions are also the people carrying them out” (Karmel, 1973:10). Related arguments were made during the 1970s. Several strands emerged among the proponents of the move to decentralise control of schools. One was based on the goal of enhancing community involvement and strengthening school-community relations through greater ‘community control’ of the management of schools (see, for example, Community Education Committee, 1979). Another was based on the benefits of encouraging diversity in curriculum through school-based curriculum development, expressed in notions such as the democratic curriculum (see, for example, Hannan, 1985). Devolution of authority was also supported on the grounds that it would help create a more targeted base for education decision making allowing schools to respond more directly to local circumstances (see, for example, Claydon, 1975). In this context, school councils were proposed as an important instrument for both enhancing community involvement and creating a broader base for decision making.

The argument that devolution of authority would empower schools to meet local needs more sensitively through grass roots control was based on the commonly-held view that bureaucracy is an impediment to quality schooling. This point of view

gained its clearest expression in a 1982 publication which argued that the administrative control exercised by centralised bureaucracies over government schools contained features and practices that worked to inhibit school effectiveness. Connell *et al.* (1982) argued that the powers vested in central administrations, rather than local schools, over teacher recruitment and allocation, over the conditions of in-service training, over the powers and roles of principals, over funding and school budgets, over the rights and responsibilities of classroom teachers, and over facilities and buildings work against providing the conditions needed for promoting quality teaching and learning. Such arrangements limit the capacity of government schools to respond to and meet the needs of their communities of users. Alternatively, the market principles governing the operation of private schools help make these schools organic to their middle-class users. According to Connell *et al.* (1982) parental choice in the selection of schools (shopping around for schools), the power of influence and control associated with parents as purchasers of an educational service, the principal as employer able to hire and fire staff, and competition provided by the other private schools that as a group operate as a market, work to promote more effective schools.

It is the role of the market that has been central to the thinking behind the reforms and policies around devolution of school management pursued during the 1980s and 1990s. In 1980, the Commonwealth Schools Commission and the state Education Departments published a joint statement on the need for choice and diversity in government schooling (Commonwealth Schools Commission, 1985). They argued that parental choice was fundamental to improvement in the quality of government schools and should be pursued for that reason. Certain conditions would be required to provide parents with more choice such as the easing of school boundaries or catchment zones, allowing parents to be able to choose schools beyond those provided for them in their local area. Government schools would operate as a kind of market in which parents would have more freedom to exercise choice. The benefits would flow from the power exerted by parents making choices in the new-formed market place, placing pressure on low demand schools to improve or offer services that made them more attractive. Across the 1980s, different state departments of education did relax the rules around the enforcement of school zones and boundaries, giving parents greater freedom to choose where to send their children. Some government schools, those in high demand, retained zones and selective recruitment as a way of managing excess demand.

Competition between schools was also central to policies which devolved decision making and increased school autonomy. In the early 1990s, the Victorian state government adopted *Schools of the Future*, a program which aimed to reduce the role and power of the Central Office of the government school system and devolve major decision-making responsibility to the school level (Directorate of School Education, 1993). The program centred on site-based management and school-based decision making. Greater control was given to schools in a range of areas. School budgeting and financial planning were devolved so that each school had control over its allocated financial resources and had the authority to determine independently how these resources were to be used across the range of staffing, services, equipment and supplies. Schools could generate their own locally-raised

funds through sponsorship or community support for educational purposes. Control over staffing was also devolved. Schools were given responsibility for the selection and employment of all teaching and non-teaching staff, including the principal. School Councils were extended the powers to determine the educational policies and objectives of the school within broad guidelines. School charters outlining future objectives and strategic planning were to be established with the local school community as embodied in the School Council.

The innovations in school governance delivered through the *Schools of the Future* program reflected the thinking of market-based reforms. There was confidence in the principles of competition and choice to deliver improvements in school quality and ultimately in student outcomes. As the architect of the program was later to claim, “there is no doubt that while factors underpinning the movement to self-managing schools are many and varied, there has always been an expectation that they will make a contribution to improved outcomes for students” (Caldwell, 1998:38). A main argument in support of the reforms was they would deliver improvements in the quality of educational practices in schools in ways that enhance student learning outcomes. This would be achieved by moving decision making and accountability closer to the child and classroom. By reducing bureaucratic controls and shifting decision-making responsibility to local schools power would be redistributed to those directly responsible for the delivery of schooling: principals, teachers, and parents who, on this view, are in the best position to determine the content and quality of education. Teachers and principals would be empowered to exert greater initiative and potentially tailor classroom instruction more directly to the needs of students in their care. The reallocation of power and authority to these key stakeholders will make schooling more responsive to the unique needs of local communities. Over time, through the forces of competition and choice, some schools will prosper and others may decline. Weaker schools will have to be supported to improve or will wither and close.

The results of the reforms over the past two decades make the state system of education today very different to that described 30 years ago by Pusey (1975) as a highly centralised hierarchical structure with top-down authority. Tightly coupled centralised bureaucratic control of individual schools has been replaced by a system of local school management and outcome-based controls. School councils have been established in government schools and schools are expected to form contracts with their local communities. Principals have been placed on contracts and subject to performance evaluation. Teacher recruitment occurs at the school level and schools have more direct control over their own budgets and personnel management. Competition in the educational marketplace between schools has increased substantially, and the co-modification of education into market-based capital has deepened.

### *Privatisation*

In 2004, in a statement on the national priorities for schools, the federal minister for education claimed that the Commonwealth Government was unashamed in its support of parental choice, pursuing the conditions needed to ensure that parents

should not only be able to choose a school for their child, but that they also receive financial support for that choice irrespective of the type of school (Nelson, 2004). This support has seen record levels of funding to private schools, both Catholic and independent. The argument for the funding of private schools based on parental choice has been taken up by independent schools associations, among other groups, pushing the view that public funding of private schools is essential for establishing a competitive educational market and, by extension, the distinction between public and private when it comes to funding is irrelevant (for example, see Independent Schools Council of Australia, 2004). As one proponent recently stated, “an important market condition is that the same amount of taxpayer funding should be allocated to each child, regardless of family income and school ownership, at the school selected by the child’s parents. This would also allow greater choice, thus encouraging schools to compete against each other to attract students” (Novak, 2006).

The support of the Commonwealth Government for private schools has been well and truly delivered in financial terms. The growth in federal government investment in schooling over the past decade has been disproportionately directed to private schools. As Figure 1.1 shows, Commonwealth Government recurrent expenditure on private schools increased by 147 per cent between 1995 and 2004. The growth in funding for government schools was less than half that rate, 70 per cent. It means that the share of funding from the Commonwealth being directed to private rather than government schools increased from 57 to approximately 66 per cent.

The growth in Commonwealth funding cannot be accounted for by changes in rates of enrolments or levels of enrolment drift. In 2004, private schools enrolled 32.5 per cent of all full-time students across Australia: 20 per cent in Catholic schools and 12.5 per cent in independent schools (ABS, 2005). Between 1995 and 2004 there was a 3.5 percentage point increase in private school enrolments as a percentage of all full-time school enrolments in Australia, but over the same period there was a 9.0 point increase in funding for private schools from Commonwealth sources as a percentage of all Commonwealth government funding on school education. The growth in funding of private schools from the Commonwealth has far outstripped enrolment growth in that sector. This is evident in changes in the per capita rates of funding from Commonwealth sources which grew for private schools from \$2018 in 1995 to \$4138 in 2004, while for government schools the rates increased from \$603 to \$1005 over the same period.<sup>1</sup>

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<sup>1</sup> These estimates were calculated using financial year expenditure and enrolment figures. Expenditure figures were derived from MCEETYA National Report on Schooling in Australia (various years). Enrolments figures were derived from ABS Schools Australia. Cat. 4221.0 (various years). Financial year enrolment figures were derived by adding two consecutive years of enrolments and dividing by two.

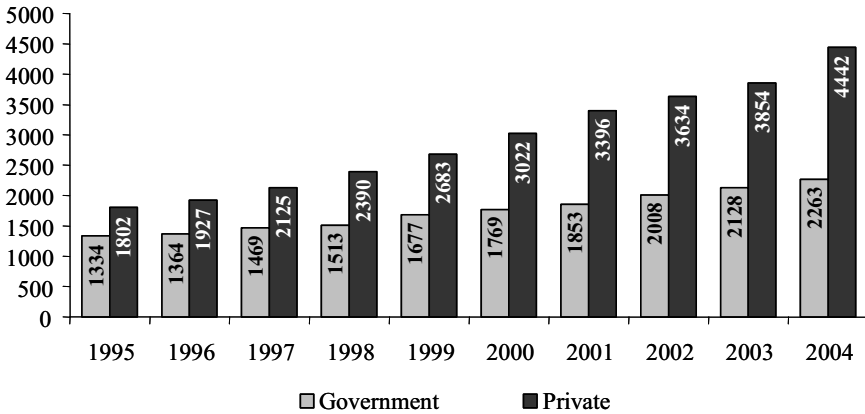


Figure 1.1: Commonwealth Government Recurrent Expenditure on Government and Private Schools: 1995-2004 (\$'000,000)

Source: Commonwealth outlays were derived from the annual National Report on Australian Schooling (MCEETYA, 2004, and various years).

State and territory governments in Australia are primarily responsible for managing and funding government schools. They also provide levels of funding to private schools, equivalent to about 35 per cent of the Commonwealth rate in 2004. Over the last decade the funding of private schools by states and territories has grown at a faster rate than that for government schools (Lamb, Long & Baldwin, 2004). However, the rate of funding has simply kept pace with changes in relative enrolment shares. The growth from this level of government has not represented a real shift in expenditure from government to private schools.

Total government funding has seen a real shift in expenditure in favour of private schools. While various studies have shown that the increases in funding for both government and private schools have represented “real term” increases (Burke, 2001; Harrington & Winter, 2002), the share of total funding increased for private schools. The shift in relative shares is by an amount far exceeding that merited on the basis of enrolments.

The increases in public funds to private schools, driven largely by the Commonwealth government, have contributed in large part to the real growth in overall school expenditure for Australia recorded and reported by agencies such as the OECD (e.g. OECD, 2005). While expenditure has grown in real terms for government schools, its growth is more modest than that for private schools. The high increases in school expenditure that have been noted for Australia in international comparisons over the past five years conceal the fact that much of the increase in expenditure on school education has been delivered to private schools. It also conceals the fact that the method in Australia of supporting private provision in schools through public funding is quite rare internationally because the funding from governments is provided without any regulations or conditions governing use and without any accountability requirements. It contains elements similar to school

voucher programs that are sometimes proposed, and sometimes adopted, as a mechanism to promote parental choice and deliver open school competition (see Hsieh & Urquiola, this volume) for an evaluation of a voucher program in Chile).

The growth in funding of private schools has helped support growth in student numbers. Despite forming the largest sector, government schools have seen very little change in overall enrolments in the last 20 years. Private schools have been the main beneficiaries of the upward trend in school enrolments. In absolute terms, the number of full-time government primary and secondary school enrolments increased by 42,000 between 1995 and 2004. Over the same time, enrolments in private schools increased by almost 181,000. It means that the enrolments in government schools increased by less than 2 percent, while private sector enrolments have swelled by 20 per cent. The differences in rates of growth between government and private schools have influenced the relative shares of enrolments and the sizes of the different sectors. Following both the changes in government funding for private schools, which helped reduce the relative costs of private education to individual consumers, and changes in demand for private schools among consumers, the patterns of school use have shifted. In the period from 1995 to 2004 in Australia the enrolment share of government schools fell consistently, while that of private schools grew. Across all schools, the government sector share fell from 71 per cent in 1995 to 67 per cent in 2004 (ABS, 2005).

The last decade has witnessed the continued march of privatisation in Australian schooling. The private sector has continued to swell in student numbers, sponsored and supported by large increases in the levels of government funding for private schools. Thanks to these intervention policies, private schools have indeed become voracious competitors for state schools in the education marketplace.

### *Rationalisation and consolidation*

The 1980s saw successive strategies for restructuring the provision of primary and secondary schools affecting both the size and organisation of schools across the system. One strategy was the abolition of the distinction between technical and high schools. From early in the century, high schools (as well as higher elementary schools and continuation schools) offered an academic curriculum to selected students and provided tracks into university and selected professions such as teaching (Ministerial Review of Post-compulsory Schooling, 1985). Technical schools offered a more practical, vocationally oriented curriculum providing skills appropriate for entry to work, with a possible track into technical and further education. One of the key recommendations of a 1985 review of post-compulsory schooling was that the activities and programs of neighbouring high and technical schools be integrated under a single council from 1 January 1987 and that by January 1988 all schools become comprehensive rather than being designated, equipped or staffed as technical or high schools (Ministerial Review of Post-compulsory Schooling, 1985, p 51). The decision to abolish the distinction between high and technical schools took effect from 1987 with the closure of some technical schools, mergers for some with other schools, and the renaming of others. All new



secondary schools were designed as “post-primary” schools to offer both academic and practical curricula.

Associated with the move to re-shape technical schools was the concern to ensure schools were large enough to offer a comprehensive range of programs. Curriculum breadth was the justification used during the 1980s to rationalise the provision of schools by either closing schools that were not large enough to support broad program delivery or urging a re-organisation of regional or district provision through school mergers. In 1989, support for school rationalisation was ratified through the introduction of a “District Provision Policy” (Ministry of Education and Training, Victoria, 1989, 1991). The District Provision Policy required schools that could not expect to offer a comprehensive curriculum with present and projected enrolments to negotiate and develop a proposal for reorganisation within their district. Various models of re-organisation were proposed. They included traditional Year 7-12 schools, multi-campus 7-12 colleges consisting of one or more junior campuses (normally years 7-10) and a senior campus (normally Years 11-12), P-12 schools (single or multi-campus) and co-operating clusters of 7-12 secondary schools (Directorate of School Education, 1992).

A central assumption of these moves was that larger secondary schools are both more efficient and more effective in terms of delivering a comprehensive range of school programs. With major growth in school completion rates across the 1980s, breadth of program delivery was necessary to ensure equitable opportunities and outcomes for the increased numbers of students now continuing to the post-compulsory years. Larger schools were viewed as less expensive to operate thanks to economies of scale and, in conjunction with meeting the requirements for curriculum breadth, became models of “Quality Provision”.

The 1990s introduced the most drastic period of school rationalisation. A change in government in 1992 led to the replacement of the District Provision Policy with the Quality Provision Framework strategy providing a new blueprint for school reorganisation. The strategy, driven by the goal of reducing the state budget deficit, aimed to reduce the number of small ‘inefficient’ schools, and to reorganise schools to ensure they were of a sufficient size to be more efficient and able to deliver a comprehensive curriculum. A taskforce identified 50 schools as unviable shortly after the election of the new government in 1992. In the following year, the teaching force was reduced by 8,000 (20 per cent) and the number of schools reduced by 171. In the period from 1986 to 1994, the number of schools closed totalled 306 (Auditor General of Victoria, 1995). It remains one of the largest and most dramatic school rationalisation programs in Australian history.

School rationalisation and consolidation led to fewer and larger schools as well as reductions in spending on education. The assumptions of the changes were that larger schools can offer wider curriculum choices and better facilities, and therefore are in a better position to offer improved educational opportunities through quality teaching and learning. Small schools, alternatively, are costly, inefficient and uncompetitive.

## IMPACT OF THE REFORMS

*School size*

The beginning of the 1980s witnessed continued decline in the school-age population in metropolitan Melbourne (see Figure 1.2). A declining birth rate since the mid-1960s contributed to a downturn in the school-age population from the late 1970s and through the 1980s. The decline, brought about by a combination of factors including an increase in the education levels of women, growth in the number of women participating in the paid workforce, an increasing trend for postponement of births, reductions in family size, and changes in the rates of marriage and divorce, came to an end in the mid-1990s. At this point, the school-age population began to grow following a rise in the number of births during the 1980s that was produced by growth in the number of women of child-bearing age, a growth sometimes referred to as the baby boom echo.

School size changes, particularly at primary school level, reflected the broader demographic changes in the school-age population. Across the 1980s, in step with the declining school-age population and also in response to enrolment drift from government to private schools, the mean size of primary schools in Melbourne fell from 368 in 1980 to 274 in 1987. This level of mean enrolments was stable until 1992.

Secondary schools in the early 1980s were also affected by the declining school-age population. However, sudden growth in post-compulsory enrolments, fuelled by recession and changes in the youth labour market, produced an upturn in 1982 and 1983 in school retention and overall school enrolments as more young people remained on at school. This fed into mean school enrolments. Even so, the growth in post-compulsory enrolments was not enough to arrest the longer-term effects of population decline, with mean enrolments falling to 644 in 1987, from 673 in 1980.

Government intervention, through the removal of the distinction between technical and high schools and the closure of some sites, led to an increase in mean enrolments in secondary schools in the late 1980s. The number of government secondary schools fell from 241 in 1987 to 231 in 1988 and mean enrolments for existing schools increased correspondingly. Over the following three years the impact of the District Provision Policy led to a further closure of 9 schools. However, it is between 1991 and 1993 that direct government intervention through closures and consolidation had its greatest impact. No longer tolerated, small secondary schools were targeted for closure. The number of secondary schools fell from 222 in 1991 to 173 in 1993. It was in this period of closures and consolidations that teacher numbers across Victoria were slashed and the overall school budget reduced in real terms.

Reflecting the sudden drop in the number of schools, mean enrolments jumped sharply as students affected by site closures made their way to surviving schools. Not all students transferred to other government schools, approximately 5 to 10 per cent of those affected shifted to private schools, though the vast majority remained

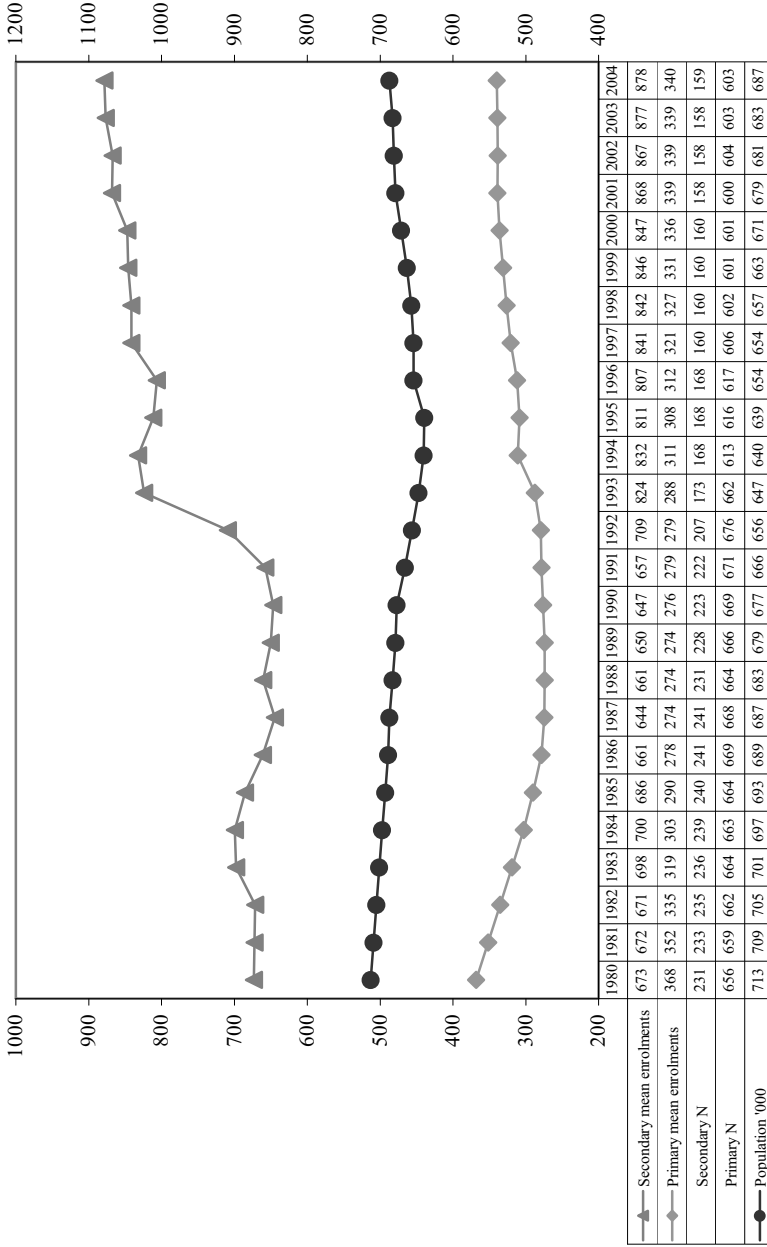


Figure 1.2: Changes in Mean School Enrolments, 1980-2004: Primary and Secondary Schools, Melbourne

Source: Derived from data provided by the Victorian Department of Education

in the government sector (Department of Education, 1994). The average size of government secondary schools increased by 167 students, from 657 in 1991 to 824 in 1994. Over the next decade mean enrolments continued to rise, partly through the effects of smaller scale closures and consolidation (8 secondary schools were closed or consolidated between 1996 and 1997) and partly through the effects of growth in the school-age population (the school-age population grew by 7 percentage points between 1994 and 2004, thanks to changes in the numbers of births during the 1980s and 1990s reflecting the ‘baby boom echo’, and increases in immigration).

Primary schools, which actually increased in number in the late 1980s, in contrast to secondary schools, were also targeted by the closure and consolidation strategies introduced by the Victorian Liberal government in 1992. The number of primary schools fell from 676 in 1992 to 616 in 1994. As a consequence, mean enrolments increased from 279 to 311 over the same period. Average enrolments continued to grow during the 1990s in response to both growth in the school-age population and the closures and consolidation of a few more schools.

As striking as the aggregate effects of government policy on the rationalisation of schools are, they conceal the effects of other processes affecting patterns of enrolments. The changes to mean school size over the whole period from 1980 to 2004 varied across different communities. The effects of policy and other changes were not at all even — there was a different experience depending on the social composition of the areas being served by government schools.

Figure 1.3 presents the trends in mean secondary school enrolments from 1980 to 2004, by the SES composition of the suburb of school location. Schools are grouped into quintiles based on the average of the disadvantage index scores from the Socio-economic Indexes for Areas derived from the Australian Census in 1986, 1991, 1996 and 2001 (ABS, 2003).

In the early 1980s, school size varied little by social area. Mean enrolments of secondary schools in the low SES areas of Melbourne in 1980 were 665, slightly higher than for schools serving high SES areas (646), and not much lower than the rates in other locations. The gap across the SES quintiles was less than 65 indicating that at this time, average school enrolments were not dependent on social area. This situation changed sharply, however, during the 1980s. As regulations around school zoning were eased to allow government schools to operate more as a market in which parents have greater freedom to exercise choice, and the strengthening of community involvement in school decision making through school councils started to take effect, school enrolments began to vary across the different regions of Melbourne. Schools in low SES areas experienced an exodus of students. The numbers of schools remained the same across much of the period, though mean enrolments fell for schools in the bottom quintile from 665 in 1980 to 491 in 1991. School size also fell for those in the second bottom quintile, from 683 to 580.

Over this period, schools in the middle and higher SES areas of Melbourne experienced growth, despite a declining school-age population. While the average across all of the Melbourne government secondary schools fell by about 20 students in the decade to 1991 (see Figure 1.2), enrolments in middle and high SES areas increased to well over 700, with a jump in mean school size of almost 120 students for schools in high SES areas. These schools appear to have been protected during

this period from the erosion of enrolments linked to changes in population. Instead they tended to increase in size during a period in which centralised control was easing, choice and diversity pursued and decision making increasingly devolved to the school level.

School closures marked the early 1990s in Melbourne. The effect on school size was most apparent in low SES areas because by 1991 low SES areas had larger numbers of small schools. The closures produced sharp rises in mean enrolments. Between 1991 and 1993 the mean size of low SES schools (bottom quintile) jumped by 244 students, from 491 to 735. The mean size of lower middle SES schools increased by 200, from 580 to 780. The suburbs housing poorer communities in Melbourne were now being served by fewer schools. Fewer schools mean higher mean enrolments. By contrast, in high SES areas, at least in the two highest SES quintiles, school closures had little effect. Schools in these suburbs were already larger in size, on average, and not exposed to closures or consolidation. Mean enrolments between 1991 and 1993 grew by 77 students and 99 students, respectively, for schools in the two highest SES quintiles.

School closures and consolidation brought secondary schools across Melbourne closer together in terms of enrolments. However, from 1993 schools again diverged depending on the social area. Schools in low SES areas experienced a collapse in enrolments, falling from 735 in 1993 to 610 in 2004 for those in the lowest quintile, and from 783 to 626 in the second lowest quintile. These falls took place in the face of growth in the school-age population. Schools in middle and high SES areas, however, went from strength to strength. High SES schools (those in the top quintile) increased in mean size by 232 students between 1993 and 2004. By the end of that time they had average enrolments in excess of 1,000 students.

The exceptional growth in mean enrolments in high SES schools is in one respect quite remarkable. During the 1990s, these schools not only competed against other government schools for student numbers, they also competed against a robust and expanding private school sector. Following both changes in government funding for private schools, which helped reduce the relative costs of private education to individual consumers, and changes in demand for private schools among consumers, the patterns of school use across school sectors changed. Table 1.1 shows that in the period from 1984 to 2004 in Victoria, the share of enrolments held by government secondary schools fell consistently, while those of independent and Catholic schools grew. Across secondary schools, the government sector share fell from 68.5 per cent in 1984 to 60.0 per cent in 2004. The share for the independent sector increased from 11.8 per cent to 17.9 per cent. The Catholic sector share grew by 2.4 percentage points to 22.1 per cent.

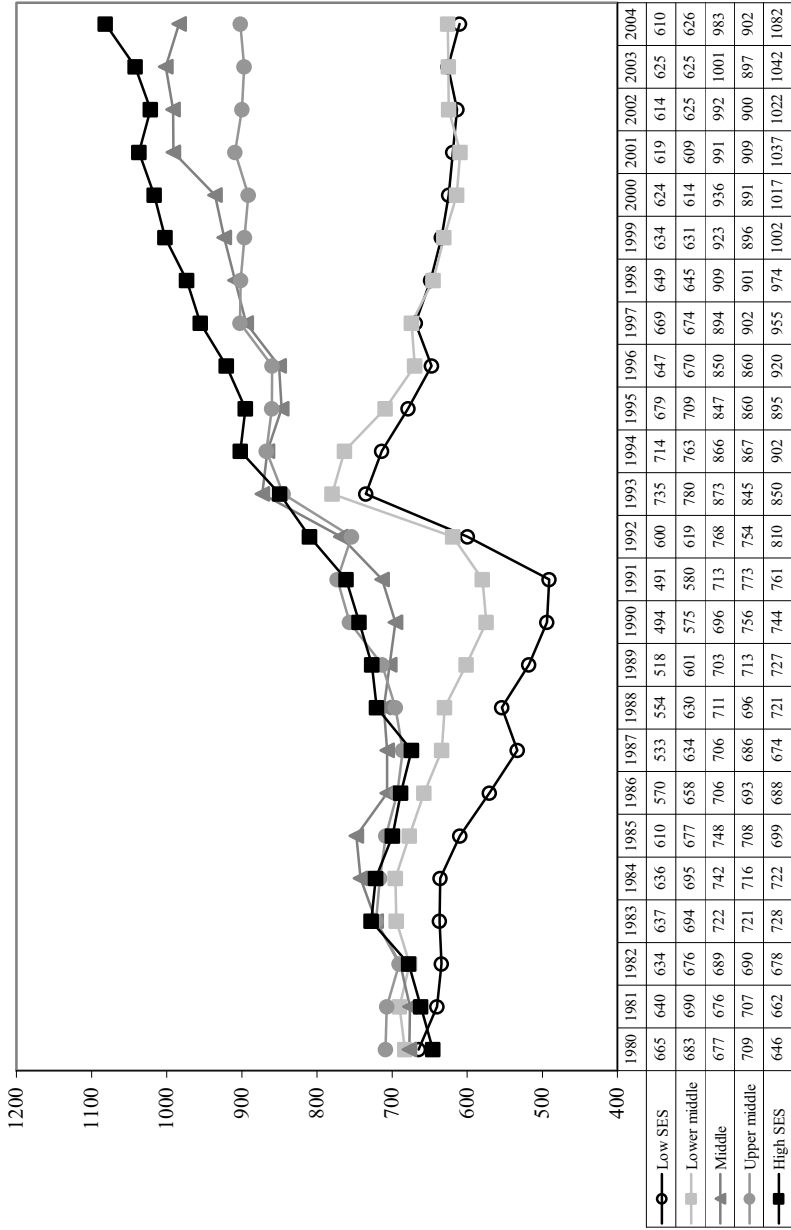


Figure 1.3: Changes in Mean School Enrolments 1980-2004, by SES (quintile): Secondary Schools, Melbourne

Table 1.1: *Enrolment Shares by School Sector: Secondary School Students, Victoria, 1984 to 2004 (%)*

	Government	Catholic	Independent
1984	68.5	19.7	11.8
1985	67.7	20.0	12.2
1986	66.5	20.4	13.0
1987	65.6	20.9	13.5
1988	64.9	21.2	13.9
1989	64.4	21.4	14.2
1990	64.0	21.5	14.5
1991	64.4	21.3	14.3
1992	64.7	21.2	14.0
1993	64.6	21.3	14.0
1994	64.0	21.6	14.4
1995	63.1	22.0	14.9
1996	62.7	22.1	15.2
1997	62.4	22.2	15.4
1998	62.2	22.3	15.5
1999	61.9	22.2	15.9
2000	61.5	22.2	16.3
2001	61.2	22.2	16.6
2002	60.5	22.1	17.4
2003	60.2	22.0	17.8
2004	60.0	22.1	17.9

Notes: From ABS (2005 and selected years), *Schools Australia, Catalogue No. 4221.0*.

In Melbourne (where almost three-quarters of all independent school enrolments for the state of Victoria are based), 90 per cent of independent school enrolments are in schools located in areas served by middle and high SES government schools.<sup>2</sup> It is against this backdrop that enrolments in government schools need to be considered. The patterns suggest that middle and high SES government schools have acquitted themselves very well in the race for student shares because their mean enrolments swelled enormously during the 1990s when the competition from private schools was drawing more and more students away from the pool of students that form the government school market.

The divergent patterns for government schools across the social landscape of Melbourne were not just an artefact of changes in the size of the school-age population. Figure 1.4 charts the changes in mean enrolments for schools in high SES (top quintile) areas of Melbourne and those in low SES areas (bottom quintile).

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<sup>2</sup> This estimate was calculated by summing enrolments after mapping the postcodes of independent schools against the postcodes of government schools in Melbourne according to the SES quintiles of government schools.

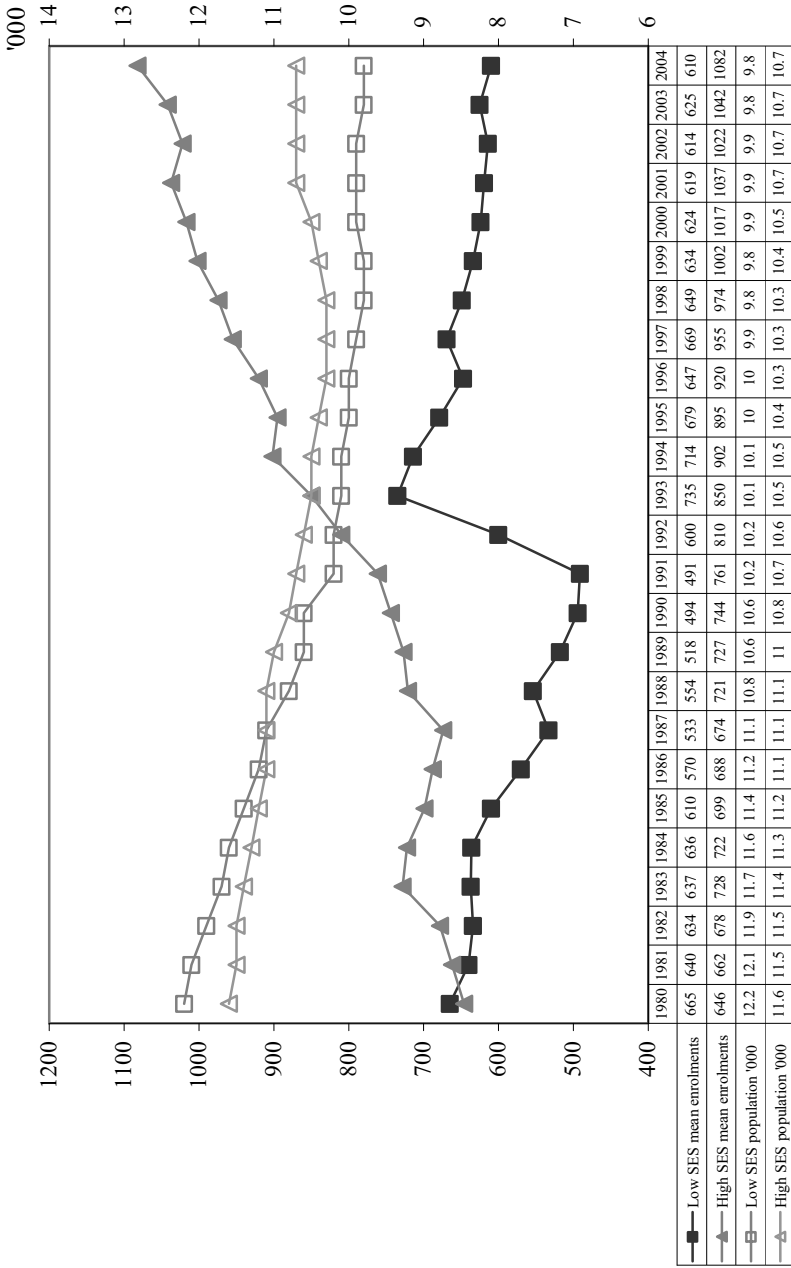


Figure 1.4: Changes in Mean School Enrolments and School-age Population, 1980-2004: High and Low SES Secondary Schools Compared, Melbourne



Enrolments are presented on the left-hand scale. Also mapped are the changes in school-age population in the areas served by both sets of schools. The areas are the statistical local areas in which schools are located. The statistical local area is a general purpose spatial unit used by the Australian Bureau of Statistics and is similar in size to a local government area (see ABS, 2001). The school-age population is presented on the right-hand scale. The estimates provided for each year represent the mean SLA school-age populations for the respective groups of schools: those serving communities in high SES areas and then those serving low SES communities.

Figure 1.4 shows that during the 1980s the decline in the school-age population in the low SES areas of Melbourne was much sharper than in high SES areas. At the same time, in the 1990s, recovery from the decline of the previous decade was more prominent in high SES suburbs. The school-age population has grown more rapidly in high SES areas. The differences in rates of decline and growth in the school-age population will have contributed to differences in school enrolment size based on social area. However, the rates of change in the school-age populations can in no way account for the massively contrasting patterns of mean school enrolments between low and high SES schools. If we were to adjust for changes in the school-age population across the 25 years, then by 2004 the changes would have added an average of 90 students to high SES schools over low SES schools. The mean gap in 2004, though, is 472 students. The changing demography of Melbourne suburbs contributes to differences in enrolments across schools based on social area, but cannot explain the huge shifts that occur over the period between schools in low SES areas and those in high SES areas.

The 1990s worked to divide the city of Melbourne in terms of government school provision. It was a period of collapse in numbers and in enrolments for government schools serving the poorer suburbs and a period of continual growth and expansion in enrolments (as measured by mean size) for schools in the wealthier areas. It was this period of marked contrast based on social area that was influenced by the adoption of the major market-driven policy reform known as '*Schools of the Future*'. This program aimed to reduce further the role and power of the central office of the government school system and devolve major decision-making responsibility to the school level (Directorate of School Education, 1993). Greater control was given to schools in a range of areas including school budgeting and financial planning, staff recruitment and the expansion of powers for school councils to determine the educational policies and objectives of the school within broad guidelines. In this new era of more 'open competition', schools could also generate their own locally-raised funds through sponsorship or community support for educational purposes.

The market-driven reforms during the 1990s giving schools greater flexibility and increased local control did help invigorate government schools in the wealthier areas. They were able to muscle-up against their robust competitive private sector counterparts and increase mean enrolments. But it has occurred at the expense of government schools in low SES areas which shed numbers at a growing rate. This divergent experience meant that by 2004, government schools were highly segregated not only on the basis of social area but also on the basis of school size

and resources. Schools in high SES areas were almost 1.8 times the size of those in low SES suburbs.

The relationship between school size and social intake has important policy and resource implications. There are advantages to size. Large schools produce economies of scale. They can provide levels of service in a more cost-effective way. Smaller schools appear less efficient because they require higher per capita funding to provide the same level of services provided in larger schools. The tendency for schools serving low SES populations to be smaller in size exerts increased resource pressures on such schools in pursuing the same educational goals as larger schools. The recent OECD study on student reading performance using PISA data reported significant gains in performance for every increase of 100 students up to 1000 students (OECD, 2001). To achieve the same level of performance as larger schools, many low SES secondary schools mainly small in size need additional resources to deliver the same services and further resources to address the problems associated with schooling students from disadvantaged backgrounds.

Schools in low SES areas are now a shadow of their former selves. It is possible to get a full sense of this by comparing the enrolment histories of only those schools that had enrolments in every year for the past 25 years. Figure 1.5 presents the results of an analysis restricted to those schools that were operating over the whole period from 1980 to 2004. In the analysis, SES is based on student intake rather than social area. It is derived from an annual school census of the occupations of parents in each school. Mean occupational status scores for the five years from 1999 to 2004 are used to group schools into quintiles of SES. The results report the enrolment histories of Melbourne schools that were operating in 2004.

Figure 1.5 shows that in 2004 low SES schools had a mean enrolment approximately 500 students below middle and high SES schools. The history of these schools shows that as a group they began the 25 year period in 1980 with enrolments above the Melbourne average (indeed above the means for the other SES quintiles), but experienced continuous decline in enrolments, interrupted only by the period of school rationalisation in the early 1990s. Government intervention at this time did not prevent the slide. Closures in the early 1990s helped swell enrolments in low SES schools for several years, though the pressures of market-based reforms helped re-assert the previous trends and by the early 2000s mean enrolments were almost 100 fewer than in 1980. This is in stark contrast to middle and high SES schools which, during the 1990s, experienced sustained and consistent increases in mean enrolments. Middle and high SES schools began the 1980s with average enrolments of around 700 students and by 2004 had reached over 1000 students. Their enrolment histories suggest that they have been able to market themselves very well to recruit students in an increasingly competitive market.

The social differences in patterns of enrolments of the last 25 years are not limited to secondary schools. Changes in primary school enrolments reflect even more dramatically the impact of the policy reforms adopted in the 1990s. Figure 1.6 shows that during the 1980s all groups of schools, irrespective of SES, experienced falls in mean enrolments, reflecting the downward trend in the size of the school-age population. The decline in enrolments was experienced slightly more strongly in

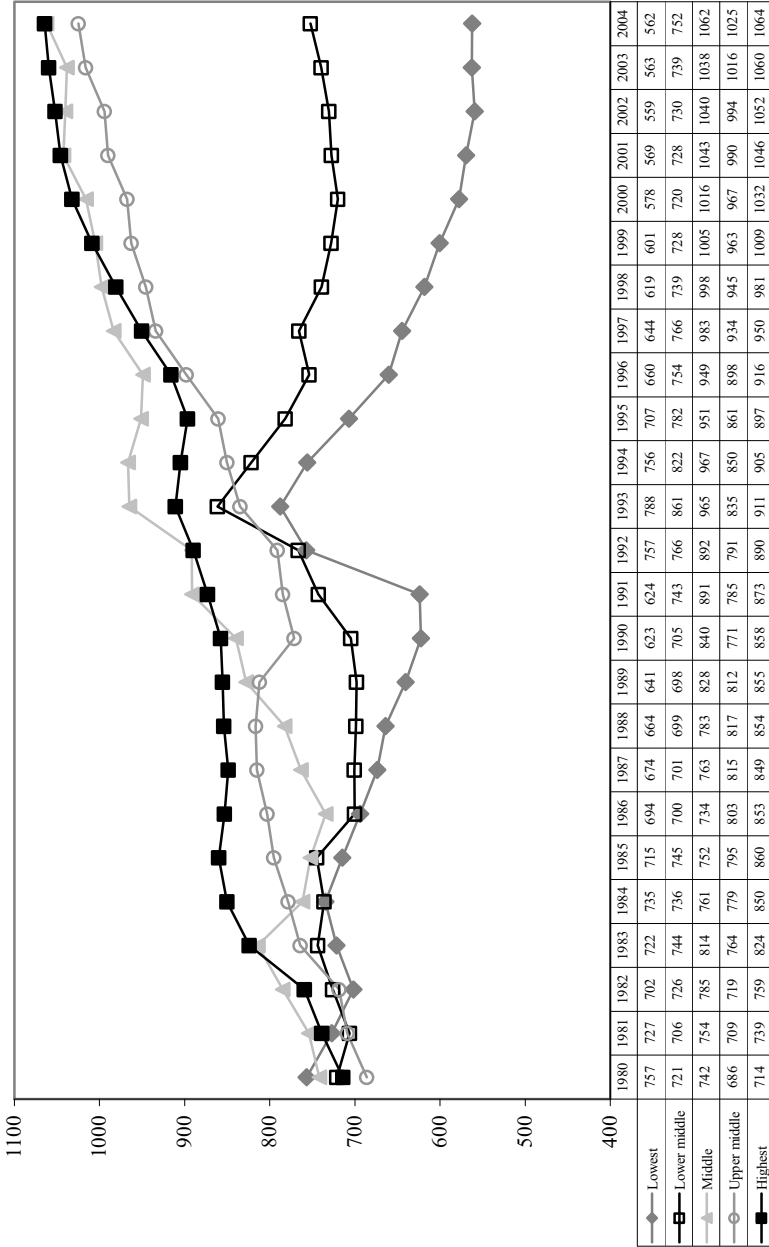


Figure 1.5: Changes in Mean School Enrolments, 1980-2004, by SES (quintile): Melbourne Secondary Schools with Enrolments in Every Year

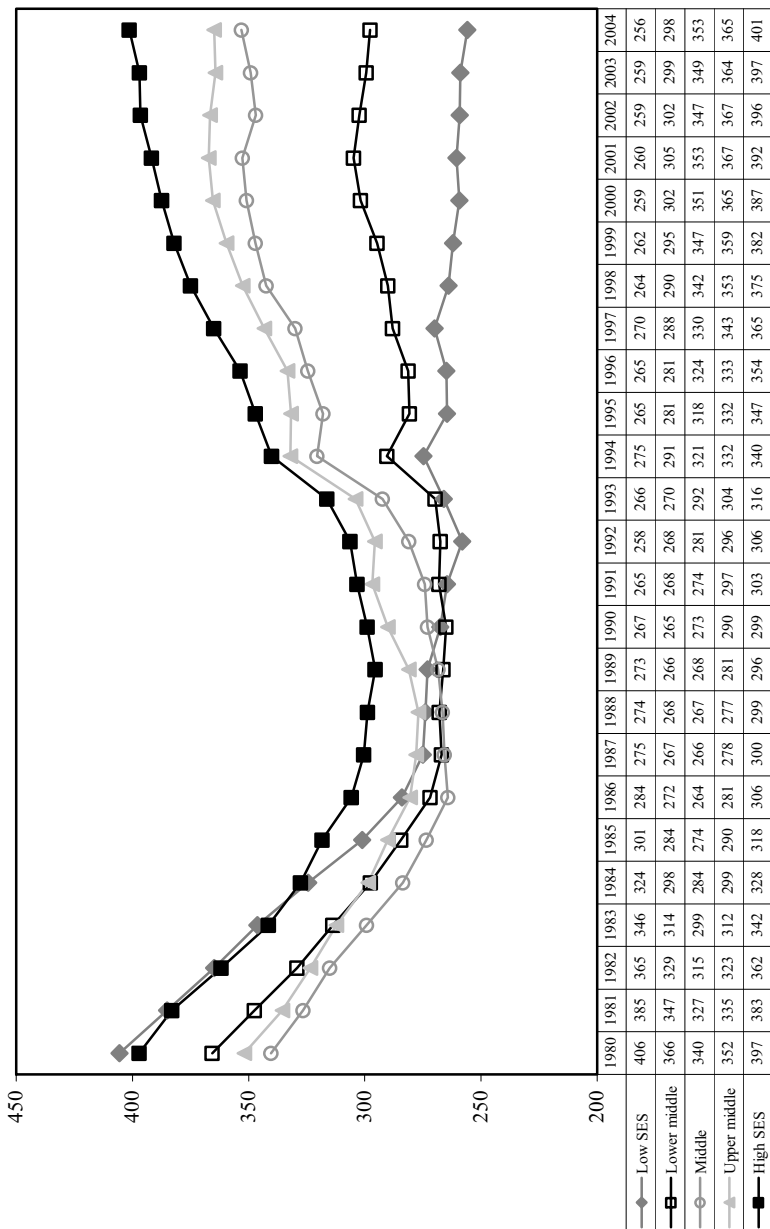


Figure 1.6: Changes in Mean School Enrolments 1980-2004, by SES (quintile). Primary Schools, Melbourne

low SES schools (those in the bottom quintile) which began the decade with the highest mean enrolment and by 1991 had the lowest. However, all other groups of schools also experienced falls in mean enrolments. This meant that in 1991 the social gaps in mean school size were no greater (indeed were even smaller) than those in 1980.

The 1990s, however, display a far different pattern. This is a period of contrasting experiences for schools based on social area. The 1990s was the period in which the market-based policy reform, *Schools of the Future*, came into effect. This reform was based on principles of school-based rather than centralised management and placed an emphasis on greater competition and choice to deliver improvements in school quality. Policies aimed at encouraging government schools to form a market place competing for students enabled middle and high SES schools to flourish. High SES primary schools attracted large numbers of students, increasing mean enrolments from 303 in 1991 to 401 in 2004. The opportunity was also used by middle SES schools to build, growing from a mean base of 274 students in 1991 to 353 in 2004. Low SES schools, however, lost ground over this period. They were not able to compete successfully in the new environment. Mean enrolments fell by about 10 students from 1991 to 2004, despite growth in the school-age population. While schools in other areas were able to recover from the declines all schools experienced during the 1980s, low SES schools continued to lose ground. Middle and high SES schools, alternatively, had regained all of their losses experienced during the 1980s and even outstripped the high base on which they began in the early 1980s.

If competition was driving the experiences of schools during the 1990s, then schools serving the wealthy suburbs were the winners. They swelled in size in the less regulated marketplace. This has implications for resources and efficiency. The resource allocation mechanism operating in government schools is based on enrolments. Larger schools get more resources. Economies of scale help make the higher levels of resources in large schools go even further. They permit schools to be more flexible in planning programs, in staffing and in offering specialist services. Larger enrolments also provide schools with the opportunity to offer a more extensive range of programs. Schools serving the poorer areas of Melbourne, by contrast, failed to grow and lost ground. They became small, and as part of this process of residualisation they experienced, collectively less competitive.

The residualisation of government schools in low SES areas has implications not only for budgets, resources and efficiency. There is also an issue about the types of students who remain and those who attend other schools. An important question is whether or not the reforms driving changes in enrolments across Melbourne have led to low SES schools not only being drained of students, but drained of their high-achieving or most able students. It is possible to get a sense of this by comparing the general achievement or academic aptitude profiles of students who live near and attend schools in low SES areas with those who live in the same areas but travel each day to government schools outside their area. In the past, when zoning regulations associated with school catchments were enforced, such movements would have been more difficult. In an environment of more open competition and

increased parental choice, however, such movement is encouraged or at least supported.

Government schools across Melbourne are grouped into several administrative regions. Table 1.2 presents information on the General Achievement Test (GAT) profiles of Victorian Certificate of Education (senior school certificate) students living in suburbs served by government schools in the Northern Metropolitan region.<sup>3</sup> This region contains a large proportion of Melbourne's low SES government schools (50 per cent of all schools in the lowest quintile of SES based on social intake are located in this region). The analysis is restricted to those students living in a suburb (identified by postcode) served by a low SES secondary school in the Northern Metropolitan region. Students are grouped according to whether they attended a school in the region or travelled each day to attend a government school in another part of Melbourne (schools in other administrative regions). In addition to the mean GAT score for students travelling to other parts of Melbourne to attend school is information on the SES composition of the government school they attend. While it would be preferable to present patterns for every year to observe trends and changes over time, data on student addresses and school attendance were available for only two years: 1994 and 2004. Data on achievement profiles (as measured by standardised assessments of skills in communication, maths, science and technology, and arts and humanities) were available for 2004 only. This does not permit an examination of changes in composition over time, but does provide an indication of whether or not students attending schools outside their local area are different in profile to those attending school within their local area.

One feature to note from Table 1.2 is that the proportion of students living near and travelling away from low SES schools in northern Melbourne to attend a school in another region increased from 1994 to 2004 by about 8 percentage points. In 2004, every fifth student living in a suburb served by a low SES school travelled each day to attend a school in another region. These students did not travel to attend a low SES school. The majority leaving their region did so to attend middle and high SES schools (48 per cent attended a school in the second highest SES quintile and 21 per cent attended schools in the highest SES quintile). This is consistent with the view that across the 1990s, in a period of market-driven school reform and increased parental choice, in the competition for student numbers low SES schools lost students to their middle and high SES counterparts.

Not only do low SES schools lose students from their own catchments. They lose the more academically able students. The average general achievement score for students bypassing their local school to attend schools in other regions was 59.4, more than half a standard deviation above the mean score of those remaining and attending schools in their local area (50.5). Therefore, not only are low SES schools in northern Melbourne stripped of student numbers, they are drained of high-achieving or more academically able students.

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<sup>3</sup> GAT is a test of general knowledge and skills in written communication, mathematics, science and technology.

Table 1.2: General Achievement Profile of Students in Northern Melbourne, by Location of School Attended

	Attending school in same region	Attending school in another region	
		1994	2004
<i>Mean GAT score (standard deviation=16.1)</i>	50.5		59.4
<i>SES profile of destination school (%)</i>		(12.3)	(20.1)
<i>Low SES</i>		3.7	0.9
<i>Lower middle</i>		5.0	2.2
<i>Middle</i>		20.6	27.9
<i>Upper middle</i>		52.8	48.0
<i>High SES</i>		17.9	21.0

Source: Figures derived using data from the Victorian Curriculum and Assessment Authority

The process of residualisation that has been occurring among schools serving the poor in Melbourne may not only denude schools of students but, as a consequence, leave them with higher concentrations of the most disadvantaged students. It is certainly the case that today schools in the low SES areas of Melbourne deal with multiple categories of disadvantaged students, at much higher concentrations, on average, than schools in middle and high SES areas. As Table 1.3 shows, schools serving communities in low SES areas have the largest densities of students from indigenous backgrounds, those with disabilities, those with needs associated with English as a second language, and those who are from the poorest families (those receiving Education Maintenance Allowance, an income-contingent welfare support payment designed to assist families with low income). This means that low SES schools tend to deal with multiple categories of need. As an example, a metropolitan primary school located in western Melbourne had a population of 212 students in 2004; of these, 14 per cent were identified as being from mobile or transient families, 56 per cent received the Education Maintenance Allowance (EMA), 10 per cent had disabilities for which they received integration funding, and 39 per cent were identified as students for whom English is a second language (ESL students). On average, the densities of disadvantaged students in schools located in high SES areas are much lower for all categories.

Table 1.3: Distributions of Disadvantaged Students, by SES Quintile: Melbourne Schools, 2004 (%)

SES quintile	Mean size	Category of student disadvantage				
		Mobility	Welfare support	Indigenous	Disabilities	English as a Second Language
<b>Primary schools</b>						
High SES	40	5.1	17.6	0.2	1.8	11.7
Upper middle	36	5.3	26.2	0.6	2.2	8.0
Middle	35	6.0	30.7	0.8	2.5	10.4
Lower middle	29	7.9	40.9	0.9	2.8	21.7
Low SES	25	10.6	60.5	2.2	4.5	46.3
<b>Secondary schools</b>						
High SES	108	4.1	20.9	0.3	0.8	4.0
Upper middle	90	4.6	30.2	0.4	1.1	3.1
Middle	98	4.3	33.8	0.6	1.2	4.1
Lower middle	62	7.7	48.7	1.1	1.6	11.5
Low SES	61	10.2	57.3	2.6	2.3	13.2

Source: Figures derived using administrative data provided by the Victorian Department of Education

The multiple layers of disadvantage compound the difficulties some schools face in promoting effective teaching and learning. Low SES schools are not only much smaller on average than middle and high SES schools, they also have higher densities of students from across the different categories of pupils with special learning needs: those from poor families, students with disabilities, indigenous students, those from mobile or transient families, and those with low levels of proficiency in English language skills. It lends support to the view that the market-based school reforms of the last 20 years have not only led to much lower enrolments in schools serving the poor in Melbourne, draining them of their most academically able students, but through this process leaving them with much higher concentrations of the various groups of disadvantaged students that have the most difficult and demanding learning needs and histories of high rates of low achievement and poor school outcomes.

#### *Relationship between school size and student achievement*

Have the changes occurring across Melbourne government schools had any impact on student outcomes? One way to assess this is to examine the relationship between school size and student achievement. Research on the relationship between school size and student achievement has in the past tended to produce mixed results. For example, in a review of over 100 studies, Cotton (1996) reported that half the research studies found superior achievement in small schools, while the other half found no significant difference between large and small schools. Other studies suggest a relationship that varies according to size. One such study of high school



students concluded that achievement increases as enrolment rises to 600, remains steady up to about 900, and then drops with increasing school size (Lee and Smith, 1997). Other work suggests that smaller schools tend not only to produce better results, but reduce the gaps in achievement associated with poverty (e.g. Fowler, 1995; Plecki, 1991).

What is the relationship between school size and student achievement in Melbourne government schools? An answer to this question may well vary depending at what point or in which year it is asked, given the changes occurring in Melbourne government schools. For example, if it was asked in 1980, the mean school size among secondary schools was 673 students and school size varied little by social intake. However, if it was asked in 2004 the mean school size was 878 and it varied markedly by social area (a gap of 472 students on average between schools located in the highest quintile of areas based on SES and schools in the lowest quintile).

Data for an analysis of achievement at secondary school level were available for two years a decade apart: 1994 and 2004. In 1994, school rationalisation in the two previous years had reduced the number of small schools and increased the mean enrolments from 657 to 832. The social gap in mean size between high and low SES schools was 188 students at this time, a reduction of about 80 students from two years earlier. 1994 was also at the beginning of the period dominated by the market-driven program, *Schools of the Future*. Over the next decade, government schools were opened up to more competition and decision making was further devolved to the school-level. At the end of the decade, mean school enrolments were about 50 students above the level of 1994, but the social gap in mean enrolments had increased dramatically over the same period by more than 280 students. In 2004, low SES schools had average enrolments of 610 students compared to 1082 in high SES schools.

Multi-level modelling is used to estimate the impact of school size on student achievement. It is a regression procedure which combines both individual-level and school-level measures. Many studies examining the relationship between school size and achievement have used school (rather than student and school) as the unit of analysis. This approach, while valid and valuable in measuring school differences in mean levels of achievement, may be less sensitive to variations in the achievement ranges within schools than an approach which combines both individual-level and school-level variables in a multi-level procedure. Multi-level modelling enables researchers to account more accurately for variance in outcome measures by partitioning within and between school differences more appropriately, and to more accurately control for student-background characteristics in estimating school effects (see Goldstein, 1987; Raudenbush & Bryk, 2002). The technique is now widely used by investigators to measure variability both within and between schools. It provides an appropriate way of measuring the effects of school size on student achievement by treating size as an attribute of the school in a regression on student-level achievement.

Table 1.4 presents the results of the multi-level modelling analyses for achievement in Year 12. Achievement is based on Victorian Certificate of Education (VCE) results measured as mean scores for students across all VCE units of study. Each unit of study has a maximum score of 50 and for every unit the mean study score is set at 30. Student-level measures (level 1) include gender and SES. School-level measures include enrolments, percentage of mobile students (students from transient families enrolling after February in the target year), percentage of students receiving the Education Maintenance Allowance (an allowance provided by the State government to assist low-income families to meet the educational needs of their children), percentage of students with disabilities, percentage of students from Language Backgrounds Other Than English (LBOTE), mean SES score (based on occupational status of parents), and percentage of indigenous students. In 2004, prior achievement is measured using results from the General Achievement Test (GAT) undertaken by students in Year 12. GAT is a test of general knowledge and skills in written communication, mathematics, science and technology. GAT results were not available for 1994. For that reason, the results from the regression procedures are presented for 2004 initially without GAT (directly comparable with 1994) and then with GAT results included. Variance components estimates are presented at the bottom of the table. These provide estimates expressed as percentages of the amount of school-level variance in student achievement accounted for by each model.

As a first step, for each year, a model was tested without any student- or school-level predictors. This model, sometimes termed a one-way ANOVA with random effects, estimates the amount of variation in achievement that can be attributed to students and to schools. The results show that in 1994 between-school variation accounted for about 17 per cent of the variation in VCE achievement. This suggests that in Melbourne government secondary schools most of the VCE achievement variation is within rather than between schools. However, in 2004, the amount of between-school variation had increased to 27.2 per cent. In other words, between-school variation has increased as a fraction of total variation. This result is quite striking and suggests that the differences between schools as a source of influence on student achievement have grown over the last decade. It is in contrast to the claims that competition, local school management, and reduced centralised control would deliver greater effectiveness and more consistent standards across schools (Directorate of School Education, 1993). Rather, the results are consistent with the view that schools have become more diverse in terms of their effectiveness, and more segregated by achievement over the period.

The second model for each year introduced the student-level factors, gender and SES. In 1994, these two factors helped explain just over one-quarter (26.4 per cent) of the between-school differences in VCE achievement. Consistent with what we know from much other research on senior school achievement, all else equal, girls tend to outperform boys (see, for example, Lamb *et al.*, 2004a; Teese *et al.*, 1995; Teese, McLean & Polesel, 1993; Collins, Kenway & McLeod, 2000) and the higher the SES of the student, the higher the level of achievement (see, for example, Lamb *et al.* 2004a; Lamb & Fullarton, 2002). In 2004, gender and SES remain significant influences on student achievement, however, they help explain less of the between-school variation. The variation linked to the inclusion of the two variables declined

Table 1.4: Multi-level Modelling Regression Estimates of Year 12 Achievement (mean VCE scores)

<i>Student</i>	1994			2004			2004 (with GAT)					
	Null model	Level 1 size	Level 2 all	Null model	Level 1 size	Level 2 all	Null model	Level 1 size	Level 2 all			
Female		1.91**	1.88**	1.64**	1.60**	1.59**	1.70**	1.68**	1.67**			
SES		0.01**	0.01**	0.01**	0.01**	0.01**	0.01**	0.01**	0.01**			
GAT							0.19**	0.19**	0.19**			
<i>School</i>												
Size		0.00**	0.00		0.00**	0.00		0.00**	0.00			
Mobility			-0.04			-0.10*			-0.07*			
EMA			-0.06*			-0.01			-0.00			
Disability			-0.01			-0.36*			-0.28			
LBO TE			0.03*			0.04*			0.03*			
Mean SES			0.04**			0.09**			0.06**			
Indigenous			0.01			-0.16*			-0.11*			
<i>Variance explained %</i>												
<i>School-level</i>	[17.0]	26.4	34.0	65.7	[27.2]	20.9	42.9	74.7	[27.2]	63.1	73.3	86.7

Source: Figures derived using administrative data provided by the Victorian Department of Education and the Victorian Curriculum and Assessment Authority. \*p < 0.05 \*\*p < 0.01

as a fraction of total school variation, from 26.4 to 20.9 per cent. Therefore, while schools have become diverse over the decade in terms of their effects on achievement, less of this variation can be explained by the social and gender characteristics of students. The third model in the analysis involved adding the school-level variable of enrolments. This is introduced without other school (level-2) factors to identify the influence of school size on its own. In 1994, the inclusion of school size increases the amount of between-school variance explained by 7.6 percentage points (from 26.4 to 34.0 per cent). The effect of school size on student achievement is positive and significant. It means that as school size increases, so does student achievement. Other things equal, larger schools provide achievement gains in student VCE results. This is also the case in 2004. However, the effect of school size has increased markedly. The amount of between-school variance in student achievement that is explained by the addition of school size is 22 percentage points in 2004, three times the effect of a decade earlier. It suggests that the achievement gains associated with larger schools over smaller schools have increased, at least in terms of explaining between-school differences in achievement. In the period marked by the impact of the *Schools of the Future* program, with its emphasis on competition, choice and local management, schools have become more segregated by achievement and by the effects of school size.

The final model in the analysis introduces a range of social composition and school intake factors. In 1994, the inclusion of the different composition factors increased the level of explained variance to 65.7 per cent, indicating that they help explain much of the between-school variation. A significant coefficient for mean SES suggests that schools with higher concentrations of students from middle and high SES backgrounds are associated with gains in VCE achievement. The same is true of schools with higher concentrations of students from language backgrounds other than English and schools with lower densities of students receiving the Education Maintenance Allowance. These sorts of intake and peer effects have been documented and discussed elsewhere (see, for example, Lamb *et al.*, 2004a). Importantly, the coefficient for school size remains significant. It suggests that even after controlling for social intake and related factors school size continues to exert a significant independent effect on student achievement. Gains in VCE scores are obtained as school size increases. That this effect remains after controlling for school mean SES and other factors suggests that, irrespective of social intake, smaller schools tend to depress levels of VCE achievement.

In 2004, the inclusion of the social composition and related intake factors also increases the amount of explained variance by about 30 percentage points, to 74.7 per cent. Mean SES exerts a significant independent effect indicating that as the level of students from higher SES backgrounds rises so does VCE achievement. This is also true for the proportions of students from language backgrounds other than English. At the same time, all else equal, the higher the concentrations of students from mobile or transient families, students with disabilities and indigenous students the lower the levels of VCE achievement. Each of these three categories of disadvantage at the school level did not exert a significant independent effect on VCE achievement in 1994, but does so in 2004. It suggests that as schools became

more diverse over the decade in terms of their effects on achievement, schools with higher concentrations of these disadvantaged students tended to do worse.

Importantly, after the inclusion of the peer composition and social intake factors, school size no longer exerts a significant independent effect on achievement. This is in stark contrast to a decade earlier where school size remains a significant influence on achievement. This does not mean though that school size is no longer relevant. On the contrary, when measured on its own school size accounts for much more of the between-school variation in 2004 than in 1994 (22 per cent compared with 7.6 per cent). What it indicates is that school size no longer exerts an independent effect, largely because school size has become so strongly tied to the social composition and intake of schools. Schools serving the most disadvantaged populations in Melbourne have become predominantly small schools. These schools produce depressed levels of achievement thanks in part to their student intake and the fact that they are small, features that are no longer distinguishable.

It is common in research on student achievement to use a measure of prior achievement to control for scholastic background differences when measuring the effects of school size and other factors. The third panel in Table 1.4 contains results after including mean GAT scores. GAT is a test to measure general knowledge and skills in writing, numeracy and reasoning and is a good predictor of Year 12 results. Students undertake GAT in the senior years so it tends to have a high correlation with Year 12 achievement, and is often used as a measure of prior achievement. The inclusion of GAT scores as a student-level (level 1) variable increases the amount of between-school variance explained. With SES, gender and GAT included, the amount of between-school variance accounted for is 63.1 per cent. These three measures explain much of the variation in student achievement linked to school differences. However, even with GAT included, school size adds a further 10.2 percentage points to the variance explained at the school level, and remains a significant influence on student achievement. The addition of the composition and intake factors raises the levels of between-school variance explained by a further 13.4 points. Once these factors are added, school size no longer exerts an independent effect. The impact of school size, significant when included on its own, is relayed through the social composition and intake factors.

The results support the view that the school reforms driving the growing diversity in schools over the last decade have intensified the gaps between schools serving the rich and those serving the poor, gaps marked by growing differences in school size, student intake, resources and achievement.

The impact of schools on achievement levels can be displayed for primary as well as secondary schools. However, for primary schools data were only available for 2004 and the analysis is at a school level using ordinary least squares regression. This procedure has often been used to examine the relationship between school size and student achievement, with achievement modelled as school-level means (see, for example, Plecki, 1991; Deller & Rudnicki, 1993). Table 1.5 reports results for Year 5 Achievement Improvement Monitor (AIM) test results. AIM is a state-wide assessment and reporting program to measure the English and mathematics skill levels of primary school students in Years 3 and 5. Several outcome measures are presented including a composite score based on all of the mathematics and English

strands as well as results for individual strands. Standardised estimates (beta coefficients) were derived from regression models in which various intake and other attributes were included to help identify predictors of achievement. Standardised coefficients are presented because they can be used to judge the relative predictive power of the independent variables. Beta is the average amount the dependent variable increases when the independent variable increases one standard deviation and other independent variables are held constant. Included in the control variables were Year 3 achievement (AIM) results from two years earlier. The inclusion of the Year 3 results as a control permits a more robust analysis because the Year 5 achievement results are based on a population that contains many of the same students, two years later. The other control variables included in the regression were the mean SES, school size (total enrolments), density of indigenous students, density of students from mobile or transient families, percentage of students from poor families receiving EMA, the percentage of students in single parent family circumstances, and the percentage of students from language backgrounds other than English.

Table 1.5 shows that the social and academic characteristics of schools have a significant impact on school achievement in Year 5. Prior mean achievement for a school is a strong predictor of Year 5 achievement levels. This is true across all strands of learning. Social intake is also influential. As the mean SES of the school rises, so does achievement across all strands. The effects are stronger in reading and number, suggesting that the learning of skills in these strands is more dependent on the social composition of the school. Similar positive independent effects are evident for schools with higher concentrations of students from language backgrounds other than English. As the density of such students increases, so does achievement. The strongest effects are in number and spelling and weakest in reading. Significant negative effects are linked to the percentages of EMA students and students from mobile or transient families. As the densities of these students rise, levels of achievement fall, all else equal. The effects are fairly consistent across all strands of learning.

Table 1.5: Standardised OLS Regression Estimates of Year 5 Mean School Achievement: Primary Schools, Melbourne, 2004

	Composite	English			Mathematics	
		Reading	Writing	Spelling	Maths	Number
<b>School intake factors</b>						
Mean SES score	0.23**	0.32**	0.23**	0.17**	0.25**	0.26**
Density of:						
EMA students	-0.17**	-0.17**	-0.13**	-0.15**	-0.18**	-0.16**
Mobile students	-0.17**	-0.14**	-0.16**	-0.13**	-0.18**	-0.16**
Single parent	0.01	0.09*	-0.03	-0.02	0.01	0.01
LBOTE students	0.18**	0.07*	0.12**	0.22**	0.15**	0.23**
Indigenous students	-0.01	-0.01	-0.09*	-0.01	0.01	0.03
<b>School size</b>						
Enrolments	-0.11**	-0.10**	-0.18**	-0.10**	-0.08*	-0.08*
<b>Prior achievement</b>						
Year 3 in 2002	0.46**	0.40**	0.35**	0.48**	0.33**	0.33**

Source: Figures derived using data provided by the Victorian Department of Education and the Victorian Curriculum and Assessment Authority. \*p < 0.05 \*\*p < 0.01

School size has a significant, negative and independent effect on school achievement. The direction and size of the coefficients suggest that, after controlling for other factors, school achievement tends to rise as school size increases. In other words, larger schools produce mean achievement gains. The gains are produced across all strands of learning, though they are highest for writing skills. Unlike the pattern for secondary schools, the effects of school size are independent, that is, school size has an effect independent of the various social composition and intake factors. In comparing the patterns it must be remembered that the outcome measure for primary schools is based on achievement at a school rather than student level. It must also be remembered there are many more primary than secondary schools (603 to 159 in 2004) and the results suggest that size affects schools in high as well as low SES areas. Keeping this in mind, the finding for school size is important because of the growing social diversification that has occurred across the 1990s and 2000s during the period reflecting the impact of the various market-based reforms. Smaller primary schools are increasingly found in low SES areas. These schools face a double disadvantage, being affected by significantly lower achievement due to both the levels of students from disadvantaged backgrounds and also to being small. Primary schools in the poorer areas of Melbourne, like secondary schools, have become subject to residualisation, thanks to the effects of marketisation delivered through such programs as *Schools of the Future*. Many of them have been stripped of students and increasingly exposed to conditions that lead to lower levels of achievement.

## ADDRESSING THE PROBLEM OF RESIDUALISATION

In 2002, Caldwell and Roskam in their treatise on the need for further market reform to government schools, claimed that “a close examination of what actually occurs where choice and competition exist, reveals that concerns that such concepts are harmful and will lead to ‘sink’ schools, drained of the best students, are unfounded” (2002:14). The evidence presented in this chapter reveals that the concerns seem to be in fact well-founded. Market reforms over the past 25 years have led to the gradual erosion of the size and efficiency of schools serving poor communities. Schools in such areas have indeed become ‘sink’ schools drained of students in absolute terms, including high-achieving students, and also of resources. Caldwell and Roskam (2002:14) go on to make the claims that “choice and competition provide the opportunity for higher levels of parent satisfaction with schooling, better academic achievement, and the reinvigoration of government schools”. It is these claims that are in fact not well-founded, or at least true for only part of the population. The results in this chapter suggest that market-based policies have indeed worked to invigorate some schools: those serving middle-class communities. Schools in these areas have grown and flourished in the new climate of more open competition. But, it has come at a huge cost because schools in poorer areas have been left behind, drained of students and resources, exposed to greater gaps in academic achievement, and confronted with closures or consolidation.

The issue of ‘where to from here’ in looking at future school reform and how to address the levels of inequality that now mark our school system is no simple matter. The negative effects of the reforms examined in this chapter are quite evident. However, as appealing as it might seem it is not just a case of reversing the reforms of the past, of bringing back the enforcement of school zones, restricting parental choice and centralising the management of schools to both bolster enrolments in schools serving poor areas and help rationalize resource distribution. We sometimes hear alluring messages from opposition political leaders about over-turning major reforms if elected to power, such as abolishing the landmark taxation reforms in Australia that occurred with the introduction of the national Goods and Services Tax or more recently removing private tolls on roadways sanctioned by government but funded by private sources, changes which could only occur at massive public expense and which, given the scale, could never seriously be considered. Such proposals are announced often without consideration of the massive infrastructural changes that have accompanied the original policies or reforms or of the changes in public expectations and perceptions that mean they cannot simply be overturned or reversed. However, this does not mean that we have to accept the status quo and live with the consequences of unjust policy. On the contrary, we need to build on the knowledge we have obtained from 25 years of exposure to the school reforms associated with marketisation, privatisation and rationalisation and consider how to use the experience to develop policies that improve provision for the poor and work to reduce inequality.

Based on the trends and patterns identified in this chapter, it is clear that from a provision point of view larger schools tend to deliver some benefits. This is not only in terms of efficiencies from a cost perspective and the benefits of additional resources gained through locally-raised revenue. Larger enrolments offer the



opportunity for flexibility in the organisation and delivery of teaching. Larger primary schools, for example, through flexible use of resources are more able to engage a range of full-time specialist teachers in areas such as art, drama, physical education, languages and music. Big schools also provide the student base needed to offer a wider choice of programs. Course choices are often cited by senior school students and families as a major reason for selection of school, and lack of choice a reason for early school leaving (see Lamb *et al.*, 2004b). Of course there may well be limits to the value of size. Some work suggests that very large schools, those beyond a certain size, tend to have diminishing returns (see, for example, Lee & Smith, 1997; Steifel *et al.*, 2000). However, small schools face particular difficulties. They tend to have less resource flexibility, they are often less able to offer a broad range of programs and thanks to fewer students they tend to have a lower income base, particularly schools in disadvantaged areas. Smaller schools are also less efficient because they have higher per capita funding needs to deliver the same level of services.

It is schools in the poorest areas of Melbourne that have been shrinking and which are in desperate need of reinvigoration. Due to size, these schools suffer from a narrow range of curriculum options, persistent low achievement and poor transition outcomes. These elements work as barriers against efforts to improve opportunities and outcomes for students. To address the problem of declining size there is a need for policies which work to ensure schools are in a position to offer an extensive and engaging range of programs and are also able to address the problem of low levels of achievement. It is gains on these grounds that will help make schools more attractive to students, parents and teachers. One recent suggestion focuses on the introduction of academic selection in the form of either selective-entry schools or accelerated programs established through the use of selective-entry testing for some year 7 enrolments as a means of attracting gifted students (see, for example, *The Age*, October 5, 2004). Accelerated programs are a feature of a number of middle-class schools. The main problem with such programs, and any form of academic selection as a basis for recruitment, is that segregating the brightest students will lead to wider inequalities between performing and underperforming schools. In poorer areas, it is likely to lead to a tiered system and further exacerbate the problems that currently exist. Selective-entry schools and programs are a short-term fix with little long-term value, creating the likelihood of further intensifying social inequalities.

Rather than academic selection, the focus needs to be on curriculum or program delivery and the models or forms of school provision needed to support curriculum breadth and program quality. As long ago as 1985, there was recognition that both primary and secondary schools need to be of a certain size to offer a full range of programs and to cater for the diversity in student needs (Education Department of Victoria, 1985). Figure 1.7 shows the importance of this. It displays the relationship between the number of Year 12 enrolments and the number of Year 12 VCE units of study offered and delivered by individual schools. The number of offerings rises with the number of enrolments. It is also the case that the breadth of VCE units across different areas of learning, modes of study and, particularly, provision in resource-intensive courses such as vocational education and training are more

extensive for bigger schools (Keating, Lamb & Clarke, 2005). There is some evidence to suggest this is also the case at primary school level where the provision of specialist programs and curriculum coverage across all key learning areas is linked to size (see Auditor General of Victoria, 1995).

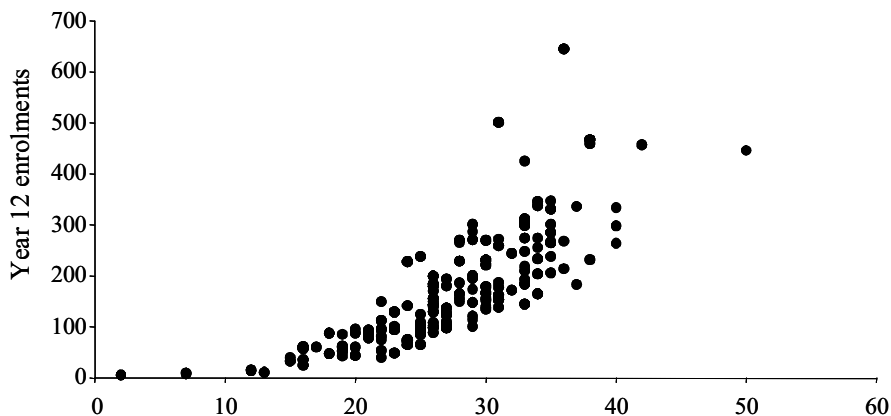


Figure 1.7: Number of VCE Units Provided, by Year 12 VCE Enrolments: Schools, 2004

Source: Figures derived from data provided by the Victorian Curriculum and Assessment Authority.

Various models of provision have been proposed in the past (as alternatives to the traditional model of 7-12 high schools) to help concentrate student numbers and promote curriculum breadth. These include, for example, the reorganisation of secondary schools into an arrangement of junior and senior colleges. One model would be Year 7-9 colleges working in association with fewer autonomous or stand-alone senior (Year 10-12) colleges. An alternative at the junior level would be to combine primary and junior secondary in a P-Year 9 arrangement. This model might also help ease difficulties traditionally associated with the transition from primary to secondary schooling as well as give junior secondary students leadership opportunities and responsibility at a critical phase in their formation (Teese, Polesel & Helme, 2005). The model of senior colleges would allow the concentration of resources in single large and comprehensive providers, with enough student numbers to offer and deliver a wide variety of programs. There are other possibilities such as multi-campus Year 7-12 secondary colleges consisting of one or more junior campuses (such as Years 7-9) and a senior campus (Years 10-12). Existing models in other parts of Victoria and Australia as well as overseas suggest that there is scope for optimism in looking at non-traditional models of provision to expand curriculum breadth and program choice (e.g. Keating, Lamb & Clark, 2005; Teese, Polesel & Helme, 2005).

There is a variety of possibilities in terms of models of provision. The important point, though, is not the specific model, but recognition of the need to re-examine

the system of educational provision in poorer communities to consider alternative options in the structure and organisation of schools that will enhance program breadth and re-build strong enrolments as well as community confidence. Central to doing this will be a regional focus or framework in which schools look to improve as a group or as part of a community of schools. This will require cooperation between schools and planning that involves groups of schools working together to consider provision at a community level, not just the area or population served by a local school. Rather than autonomy, isolation and competition as principles of organisation and the *modus operandi*, there will be a need for shared responsibility and cooperation between schools. Regional administrative bodies for government schools have new and heightened roles and responsibilities in this process. They must work to facilitate shared cooperation in planning at a whole of region level.

In addition to changes in models of school provision and planning there is a need to consider funding. A feature of schooling in Australia over the past 15 years has been the growth in public funding for private schools. It has helped create the situation in which many mainstream independent schools, taking account of all sources of funding, now operate with a per capita level well in excess of double the recurrent resources available to government schools (Lamb, Long & Baldwin, 2004). This is in addition to the huge capital funds, elaborate buildings and physical plant, and extensive classroom and teaching resources as well as sporting facilities which multiply the resource gaps many times more. Based on this situation, an objective observer may well conclude that the schooling for children from some families in Australia is being taken far more seriously than the education for others. Within this context, smaller government schools are particularly disadvantaged. The tendency for smaller schools to be located mainly in areas serving low SES populations exerts increased resource pressures on such schools in pursuing the same educational goals as larger schools. To achieve the same level of performance, many small low SES schools need additional resources just to deliver the same services and then further resources to address the problems associated with schooling students from disadvantaged backgrounds. This means that smaller schools require larger per capita funds to be effective. Resource pressures are eased as schools become larger. Alternative models of provision on a regional basis may help promote larger schools, but targeted funding will also be critical to help schools implement effective quality programs in largely disadvantaged settings.

Currently, funding available to target disadvantage in small schools does not even reach the levels that many larger schools achieve through locally raised funds. But there are other issues than just the levels of funding. There is the matter of how effectively funding to address disadvantage is targeted and used. At present, the main approach to addressing the additional learning and social needs of students in disadvantaged schools is to allocate resources using a top-up or compensatory distributive model based mainly on numbers and categories of students rather than strategies or programs. Funds are allocated to schools without clear ideas about how the resources will or should be spent. Instead there needs to be a way of identifying successful practices and conditions within schools and classrooms that enhance learning in disadvantaged school settings. Then it is necessary to allocate resources to ensure that the practices can be implemented and sustained more broadly. What is

required is an equity funding framework which is program driven or based and where there are sufficient funds provided to ensure that the strategies can be implemented and can operate successfully in a sustained way.

Over 25 years, market reforms and the subsidisation of private schools (as a policy to promote choice and diversity) have worked to reinforce the privileges of the wealthy and residualise the poor. It is now time to address the widening divide between schools serving the poor and those serving the rich. Innovations in models of provision and funding are the sorts of strategies that will be required for they will help provide the conditions that will enable smaller schools in Melbourne to achieve improvements in program delivery and work to re-build strong enrolments as well as community confidence.

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## 2 Education Markets and Social Class Inequality

### A Comparison of Trends in England, Scotland and Wales

*Linda Croxford and David Raffe*

#### INTRODUCTION

##### *Educational quasi-markets and social inequality*

In the 1980s and 1990s Great Britain introduced policies to develop quasi-markets in education, similar to policies introduced in other countries at that time (Hirsch 1994; Whitty *et al.*, 1998; Lauder, Hughes *et al.*, 1999). Influenced by the New Right and neo-liberalism, quasi-markets apply market principles to the provision of public services. They differ from ‘real’ markets in that the services provided are free to the user and the providers may not be private profit-maximising organisations (Le Grand and Bartlett 1993). The typical features of educational quasi-markets are parental choice of school, the publication of information to inform this choice, enrolment-linked funding, the granting of management powers to schools, the corresponding reduction in the powers of educational authorities to plan education, and encouragement to schools to diversify. In Britain the Conservative governments of 1979-1997 introduced all these features of quasi-markets in a series of reforms, the most significant of which was the 1988 Education Reform Act for England and Wales. These reforms attempted to remould — in the eyes of critics, to undermine — the predominantly comprehensive school system created by an earlier wave of secondary-school reform that began in 1965. However, this attempt was not uniform across Britain: England moved much further in the direction of quasi-markets than Scotland or (to a lesser extent) Wales.

The creation of quasi-markets is an example of what Brown (1995: 43) describes as ‘a change in the “rules of engagement” to mediate the competition for credentials’. He argues that globalisation and the insecurities associated with it have intensified positional competition in education and encouraged a shift towards market rules of engagement in place of rules based upon the ideology of meritocracy and the introduction of comprehensive education (Brown 2000). ‘This change in the rules of engagement is giving the middle classes the opportunity to capitalise on their superior market power in the competition for credentials within a market-driven system of education.’ (Brown 1995: 46) Education markets thus represent a new mechanism of social closure. This theme is echoed by Ball, who

argues that ‘the particular policies of choice and competition give particular advantages to the middle-class, while not appearing to do so, in the way that selection policies did in a previous policy era’ (Ball 2003: 26).

The main argument of the social-closure theorists is not that market rules of engagement necessarily result in higher levels of class inequality than existed in earlier generations. It is rather that under the new social conditions created by globalisation and other socioeconomic changes, market rules of engagement provide the middle classes with a more reliable way to preserve their positional advantages than the rules of engagement associated with earlier school regimes such as selection or the pre-market comprehensive system. In this chapter we aim to test this claim by comparing the stronger and weaker market regimes in the different ‘home countries’ of Britain: England, Scotland and Wales.

Many of the researchers who have studied parental choice and related market policies in England, Wales and Scotland have broadly supported Ball’s conclusion that these policies ‘give particular advantages to the middle class’ (Adler *et al.*, 1990; Echols *et al.*, 1990; Willms 1996; Gewirtz *et al.*, 1995; Woods *et al.*, 1998; Gibson and Asthana 2000; Walford 2001). Their research suggests that under the typical rules of engagement of educational quasi-markets the mechanisms of social closure are as follows:

1. *The middle classes have more effective market strategies.* Middle-class parents are more likely to exercise choice, and they have the social and cultural capital to do so in a way that maximises positional benefits for their children.

2. *Parents’ choices create or accentuate a hierarchy among schools, which is associated with social class.* Choices tend to favour ‘good’ schools and those in middle-class areas, which become oversubscribed and enjoy the benefits of full rolls, a favourable student composition, low per capita costs, a good reputation and high staff and student morale. Conversely schools serving working-class or socially disadvantaged areas risk losing pupils and may enter a ‘spiral of decline’ with lower resources, higher per capita costs, a less favourable student composition, poor reputation and low morale. There is no self-correcting mechanism as in other markets. Consequently, school differences increase. Competition encourages vertical (hierarchical) rather than horizontal (pluralist) differentiation, and reinforces academic values. This reflects the status of education as a positional good and its influence on life chances and social reproduction.

3. *Schools’ own market responses reinforce this hierarchy.* Oversubscribed schools often select students on criteria which favour the middle classes, such as aptitude, self-presentation, motivation or parental interest. All schools must maintain or enhance their position in the hierarchy in order to attract (good) students and remain viable. To do this they emphasise or adopt the pedagogies, curricula, organisational styles, reward systems and ethos which will attract ‘good’ (middle-class) students. In sectors of education where positional competition is important education markets encourage a uniformity of values, unless strong supply-side measures are introduced to promote diversity.

4. *Within-school class inequalities in attainment increase.* This effect tends to be implicit in the research literature. As a result of (3) the school system as a whole becomes more ‘middle-class friendly’. That is, it recognises and rewards the cultural



and social capitals which middle-class students are most likely to possess. Inequalities of attainment within schools become wider.

5. *Social segregation increases, leading to a further increase in class inequalities in attainment.* As a result of (2), reinforced by (3), social segregation increases — that is, social classes become less evenly distributed across schools. This affects inequalities in attainment in two ways. The middle classes increase their monopoly of the most effective schools; and they benefit more from contextual effects. The contextual effect is the effect of the characteristics of fellow students (such as their social class or prior attainment) on the outcomes of a given student, independent of his or her own characteristics. Where schools are socially segregated contextual effects compound the inequalities that may be found among individuals within each school. Not only does the typical working-class child perform worse than other students at the same school; s/he is further disadvantaged by attending a more working-class school.

6. *The contextual effect becomes stronger.* A further consequence of (3) is that as the school system becomes more ‘middle-class’ in ethos, the potential influence of a middle-class peer group increases. The contextual effect therefore becomes stronger, in the sense that even with a constant level of social segregation the class composition of fellow students becomes more important.

7. *The education system’s capacity for progressive change is restricted.* As a consequence of the hierarchical and competitive relationships among schools, the fragmentation of the system, and the replacement of democratic control by control through the market, the education system’s capacity for collective action to promote social equality is reduced (Harris and Ranson 2005).

However, despite the enormous volume of research into education quasi-markets, the rules of engagement and the model of social closure summarised above are not accepted by all researchers. Some argue that quasi-markets can reduce social inequalities compared with planned systems, as they provide greater educational choice for working-class parents who lack the resources to pay for private education or to buy houses in the catchment areas of good neighbourhood comprehensive schools (Hargreaves 1997; Gorard *et al.*, 2003). Any disadvantage experienced by the working classes may be merely temporary, as they learn how to compete under the new rules of engagement. The increasing popularity of faith schools constitutes evidence of greater pluralism among schools as opposed to an increase in hierarchy. On the basis of analyses of national data sets for England and Wales, Gorard *et al.*, (2003) have challenged some of the empirical conclusions of the model. They found that market reforms were more often followed by a reduction in social segregation than by an increase, and they found no evidence of ‘spirals of decline’ among low-performing schools.

Part of the problem is that education markets vary locally, and much of the British research has been based on local case studies from which it may be difficult to generalise. These studies also provide little counterfactual evidence to suggest what might have happened in the absence of market reforms. Most national studies, on the other hand, have been based on data sets which lack any measure of social class. The social impact of markets has been assessed using measures such as entitlement to free school meals, which provide poor proxies for social class and

focus on the most disadvantaged minority rather than on a wider span of advantage and disadvantage. In addition to the problem of how to measure social differences, there are disputes over the appropriate techniques for analysing such concepts as segregation; the results of research are sensitive to the choice of technique, and changing marginal distributions may cause segregation indices to change (Gorard and Fitz 2000, 2006; Gibson and Asthana 2000; Noden 2002; Gorard 2002, 2004; Goldstein and Noden 2003). A further limitation of the research is that much of the empirical debate has focused on the specific issue of segregation. There has been much less attention either to the other mechanisms of social closure outlined in the model above, or to the impact of markets on class inequality at a macro level. To our knowledge, no researcher has been able to identify a change in national levels of class inequality which can be clearly connected with the effect of education markets.

In this paper we aim to avoid some of these limitations of earlier research by comparing the impact of quasi-market reforms on comparative levels of inequality in England, Scotland and Wales. We are not able to compare systems where quasi-markets are present with systems where they are absent, but we can compare stronger and weaker market regimes.

Other studies which have used cross-national comparisons to assess the effect of different national schools policies (e.g. OECD 2004) face the objection that any differences in outcomes may be the result of differences in national economic, social and institutional circumstances rather than differences in the policies themselves. Our comparison yields stronger evidence than such comparisons, for two reasons. First, it is a 'home international' comparison (Raffe *et al.*, 1999; Byrne 2005). The education systems of Britain share a similar economic, social and cultural context to a much greater extent than in the case of other cross-national comparisons. They are also affected to a similar extent by the global social and economic trends which — according to the social-closure theory — stimulate a shift to market rules of engagement in the positional competition for credentials. There is therefore a stronger chance than in other comparisons that any differences may be attributed to the differences in market regime rather than to extraneous contextual factors. Second, we study comparative change. We are less interested in the relative levels of inequality across the three countries than in the relative change in these levels. Specifically, we compare changes in inequality in England, which moved from a very weak to a relatively strong market regime during the 1980s and 1990s, with Scotland where the system changed much less over this period. If the move to market rules of engagement has favoured the middle classes, therefore, we would expect to see the greatest relative increase in inequality in England, and the smallest in Scotland.

### *Variations in market regimes*

The diversity of education markets, both local and national, is a recurring theme of the research (Hirsch 1994; Adler 1997; Whitty *et al.*, 1998; Woods *et al.*, 1998). Three sources of variation contribute to the strength of market regime: the market model, market conditions and educational cultures.

The first source of variation is in the market model itself. Woods *et al.*, (1998) argue that quasi-markets or 'public-markets' can be represented by a continuum from a fully planned system to a free market. As noted above, a quasi-market is characterised by several features: parental choice, enrolment-based funding, devolved powers to school managements, the removal of planning powers and the publication of information. Market regimes vary in the number of these features that are present; the more features, the stronger the market regime. Similarly, each of these features may be present in a stronger or weaker form: for example, varying proportions of a school's budget may be linked to enrolments, and systems may vary in the way they structure parental choice (some require an active choice by all parents, others only by parents who do not accept an assigned school). These differences also contribute to the strength of the market regime. A particular example of a weak market regime is a parental choice regime, where the reforms concentrate on the demand side of the market by providing for parental choice, but do little to 'deregulate' the supply side (Adler 1997). Parental-choice regimes might affect inequalities through the direct effect of parents' choices (mechanism 2 in the above model) but they have less impact on other mechanisms that increase inequality (mechanisms 3, 4, 6 and 7). The stronger the market regime, the stronger the expected effect on class inequality.

However, the strength of a market regime will depend not only on the formal market arrangements but also on market conditions and educational cultures. Market conditions include logistical and demographic factors which influence the operation of markets. These include factors which influence the number of schools among which a parent can realistically choose: the density of population, average size of school, travel arrangements and so on. They include the diversity of existing schools and the information which parents possess about them. They include local administrative arrangements which structure choice. Some of these factors vary nationally; others vary locally but may produce national differences in average local conditions.

By 'educational cultures' we mean the pre-existing practices, beliefs and values of parents, school managers, teachers, local administrators and other participants in the education system. Formally similar market policies may have a different impact in a system where these participants share individualistic, liberal values and believe in the applicability of market principles to education, compared with a system where the practices and values of a neighbourhood comprehensive system prevail. In this analysis, we are interested in the actual (market or other) regimes which emerge from policy changes, not those which the policy-makers may have intended.

We therefore conceive of education markets as varying along a dimension from non-market regimes to weak market regimes (such as parental-choice regimes) to strong market regimes. However there may be other dimensions of variation. Hirsch (1994) distinguishes between competitive and pluralistic choice policies. Competitive choice policies are supply-led and correspond to the concept of a quasi-market discussed above. They tend to encourage uniformity, in the sense that they reinforce a single set of educational values by which all schools are judged (even if the judgements based on these values lead to greater polarisation among schools). Pluralistic choice policies involve additional 'supply-side' interventions to

encourage greater diversity among schools. They therefore modify market principles, or go beyond them, often in order to resist the polarising tendencies of markets and to encourage more ‘horizontal’ differentiation. Whether they succeed in this depends on whether the policies are strong enough to offset the pressures towards hierarchy that are inherent in positional competition. It also depends on the extent to which pluralist choice policies are congruent with market conditions and educational cultures.

*Variations across the home countries*

We now use this framework to analyse policy variation across England, Scotland and Wales. Market conditions vary within all three countries, but their average effect is to weaken education markets in Scotland and Wales relative to England, even when legislation and formal market arrangements may be similar. Populations in Scotland and Wales are more dispersed; schools are larger; fewer parents have the opportunity to choose schools and they have less incentive for doing so because schools are more uniform and school standards vary less (Croxford 2001; Reynolds 2002). Similarly, educational cultures, values and practices in Scotland and Wales favour the traditional neighbourhood school, and are less sympathetic to market principles (Jones and Roderick 2003; Paterson 2003). As a result, even formally similar policies may result in weaker market regimes in Scotland and Wales than in England.

	England	Scotland	Wales
<i>1980s</i>	Weak parental choice	Strong parental choice, influence of neighbourhood comprehensive tradition	Neighbourhood comprehensive system with weak parental choice
<i>1990s</i>	Quasi-markets, attempt to move towards pluralistic competition	As above: very limited move towards quasi-markets	Weak quasi-markets, continued influence of neighbourhood comprehensive tradition

*Figure 2.1: Education Markets in England, Scotland and Wales in the 1980s and 1990s*

These different market conditions and educational cultures have interacted with policy initiatives to create different trends in market regimes in the three countries in the 1980s and 1990s. Our argument is summarised in Figure 2.1.

England introduced a weak form of parental choice in 1980, in a differentiated school system which had converted less completely to comprehensive education than either Scotland or Wales. The 1988 Education Reform Act introduced quasi-markets: it strengthened parental choice, required attainment information (‘league tables’) to be published to inform this choice, devolved powers to school managements, linked funding to enrolments and reduced the powers of local authorities by, among other things, enabling schools to ‘opt out’ of their control. It also provided for a new form of school, City Technology Colleges. A series of

measures during the 1990s devolved more powers to schools and created further categories of schools such as specialist schools. The strategy of encouraging schools to diversify was taken further by the New Labour governments after 1997. By the end of the 1990s England had established a relatively strong market regime and was attempting to move to a regime of pluralistic competition.

In 1981 Scotland introduced a stronger form of parental choice, but to a system in which neighbourhood comprehensive schools were well embedded. Schools retained their catchment areas, remained relatively uniform and tended not to compete actively in education markets (Teelken 2000). Devolved school management was phased in during the 1990s but the devolved powers were weaker than in England and they were not used to promote diversification. Local authorities retained more influence, and provisions for schools to opt out were ignored (only two schools opted out). Scotland never introduced effective quasi-markets, let alone pluralistic competition. Measures to introduce new categories of school were either not introduced in Scotland, or ignored. Scotland therefore had a weak market regime which changed relatively little over the period.

Wales is an intermediate case. In the 1980s it introduced a weak measure of parental choice (as in England), but in a more uniform system of neighbourhood comprehensive schools, with a tiny private sector. Geographical as well as cultural factors made choice less meaningful than in many parts of England. Most of the formal provisions of the 1988 Act applied to Wales as well as England, although for the same geographical and cultural reasons they had less impact. Very few schools opted out, and no new City Technology Colleges were created. Like Scotland, Wales largely avoided the move towards school diversity during the 1990s.

We conclude that during the 1980s and early 1990s England moved furthest in the direction of a strong market regime, and Scotland moved least, with Wales somewhere in between.

## RESEARCH QUESTIONS

Our study covers cohorts of young people who completed compulsory education in England, Wales and Scotland in various years between 1984 and 1999. It focuses on attainment at the end of compulsory schooling in GCSE qualifications in England and Wales and Standard grades in Scotland. These qualifications have a similar structure and play a similar function in the three education systems. They are attempted by almost the entire age cohort. They are high-stakes qualifications, strongly predictive of future educational and labour market trajectories. They are central to the process of positional competition, and an appropriate criterion by which to assess social-class inequalities in attainment. Our main research question is:

1. *Has the trend in social-class inequality in attainment among comprehensive school students differed across England, Wales and Scotland?* If the move to market rules of positional competition has favoured the middle classes, we would expect to see the greatest relative increase in inequality in England, and the smallest in Scotland. We would also expect to see any divergence coinciding with the period in which policy changes came into effect. In particular, we would expect to see a

divergence associated with the impact of the 1988 Act in England and Wales. Of the seven mechanisms of social closure listed above, mechanisms (1) and (5) relate to the process and outcomes of entry to secondary school, typically at age 11. The 1988 Act introduced new parental choice arrangements for those entering secondary school from 1989 onwards, who typically completed compulsory education and took GCSEs in 1994 onwards. Gorard *et al.*, (2003) suggest that the effects of the policy change need to be observed over several cohorts, as working-class parents may be slower than middle-class parents to learn the new rules of positional competition. (This is the ‘starting-gun effect’ discussed further below.) The other mechanisms of social closure (2, 3, 4, 6 and 7) potentially affect students already at a school, so we would expect to see some effect on pupils’ GCSE attainments before 1994. Moreover, other policy changes before and after the 1988 Act helped to develop an education market, so we will look for evidence of continuous divergence across the whole period covered by the study.

Our second research question attempts to take account of any interaction between the comprehensive sector and private and state-selective schools:

2. *Is the conclusion in (1) affected if we take account of all students and not only those from comprehensive schools?* All three countries had a private sector, although this was largest and most influential in England and smallest and least influential in Wales. Advocates of choice policies argue that they extend the possibility of choice to those who lack the resources to choose a private education. Market policies in public education may therefore influence the allocation of students between the state and private sectors, and they may do so differentially across social classes (Echols *et al.*, 1990; Ball 2003). Market policies may similarly influence the allocation of students between comprehensive schools and the selective state (grammar) schools that have survived in several areas of England (but not in Wales or Scotland). In 2004 grammar schools accounted for some 4.6 per cent of secondary students in England (Commons Hansard 2004: 18 March) and in some areas their presence meant that other local schools were comprehensive in name only.

Our third set of research questions attempt to test some components of the model of social closure outlined earlier in this paper:

3. *Within the comprehensive sector, is there a different trend across the three home countries in:*

- the hierarchy of schools (mechanisms 2, 3)?
- within-school social-class inequalities (mechanisms 4 and 7)?
- social segregation (mechanism 5)? and
- contextual effects (mechanism 6)?

Finally, underlying all three questions is a concern to assess the impact of policy:

4. *Can any differential trends observed in response to questions 1 to 3 be attributed to the differential change in market regimes in the three home countries?*

## Data

We use the England and Wales Youth Cohort Study (YCS) and the Scottish School Leavers Survey (SSLS). These are nationally representative surveys of young people attending all categories of schools except special schools. We use data from the first

sweep of each cohort, which covers young people aged 16-17. Both surveys are conducted by post, with questionnaires sent to sample members' home addresses. Samples are selected by date of birth. Up to 1990, the YCS samples were clustered by school, with an initial stratified sampling of schools. Since 1993, the YCS sample has been designed as a simple 10 per cent random sample, but because there are difficulties with school-level non-response at the sampling stage, and to compensate for this, there is a further stage of sub-sampling to give a sweep 1 final sample that is representative of a population matrix of pupil numbers by school type by sex by region. In line with the relatively small size of the population of Wales, the YCS sample for Wales tends to be quite small, except in 1990 and 1995 when the sampling fraction for Wales was boosted (see Croxford 2005 for further details). The SSLS sample is a single-stage birth-date sample. Up to 1996 the SSLS sample was 10 per cent of the target population, and since 1998 it has been 20 per cent. Response rates at sweep 1 of YCS have declined from 77 per cent in 1986 to 65 per cent in 1999; response rates at sweep 1 of SSLS have declined from 81 per cent in 1984 to 63 per cent in 1998.

Weighting systems are used to compensate for non-response bias. In this chapter unweighted data are used in statistical models, but weighted data are used for descriptive statistics and charts.

<i>YCS (England and Wales)</i>	<i>SSLS (Scotland)</i>
(1984)	1984
(1985)	
1986	1986
1988	1988
1990	1990
(1991)	
1993	(1992)
1995	
1997	1996
1999	1998
(2002)	(2002)

*Figure 2.2: Cohorts*

Notes: Cohorts are identified by the year in which they completed compulsory schooling; they were first surveyed in the following year. Cohorts in brackets are excluded from the main analyses (see text).

The cohorts surveyed by the YCS and SSLS respectively are listed in Figure 2.2. We refer to each cohort by the year when cohort members completed compulsory

schooling; our measure of attainment is based on qualifications attempted in this year. We have omitted some cohorts: the 1984 YCS because it did not cover independent schools and because the coding of social class was different from, and cruder than, in later cohorts; the 1992 SSLS because it was based on a different survey design which reduced comparability with other cohorts, the 1985 and 1991 YCS which were not included in the integrated dataset constructed for the project, and the 2002 YCS and SSLS whose data were not available in time for the study. We also note that the 1999 YCS was administered by a different survey organisation than earlier surveys. This may have affected comparability, especially in the recording of social class, as we see below; unfortunately the survey documentation does not record coding procedures in sufficient detail for us to assess the discontinuity.

We use data from the first sweep of each cohort, carried out after the last year of compulsory schooling when most sample members had taken GCSEs (in England and Wales) or Standard grades (in Scotland). These are subject-based examinations, typically taken in up to ten subjects in England and Wales and up to eight subjects in Scotland. Each subject is separately certificated, and graded on a scale from A\* to G (GCSEs) or 1 to 7 (Standard grades). For the analyses below we have calculated an attainment score by allocating 7 points for an A or 1, 6 points for B or 2, 5 points for C or 3, and so on. In Scotland Standard grades were phased in over a number of years starting in 1986; our scale aggregates scores for the old and new qualifications. Small differences between the average attainment levels in each country may reflect differences between the qualifications and their place in school timetables. For example, most Scottish schools' timetables allowed for seven or eight Standard grade subjects, while many English schools allowed for up to ten GCSEs. Our main concern in this chapter is not to compare the absolute levels of attainment but trends in inequality in attainment across social classes.

The questionnaires asked young people to record the occupations and employment status of both parents, and we use this information for our measure of social class. This is based on the National Statistics Socioeconomic Classification (NS-SEC), collapsed into three categories: managerial/professional, intermediate and working (Rose and O'Reilly 1998). A fourth residual category includes those with no reported class. We define social class as the higher class of mother or father. The NS-SEC was produced for the 2001 Population Census; the data were coded using earlier classifications and we have converted these to the NS-SEC, as documented by Croxford (2005b).

### *Trends in social class inequality in attainment*

Figure 2.3 shows trends in average attainment by social class and country. Attainment rose over the period among all classes in all countries, but social-class differences persisted. In each cohort in each country managerial/professional-class students had the highest average attainment, followed by intermediate-class students and then working-class students. Unclassified students, for whom no classifiable parental occupation is recorded, consistently had the lowest average attainment, following closely behind working-class students.



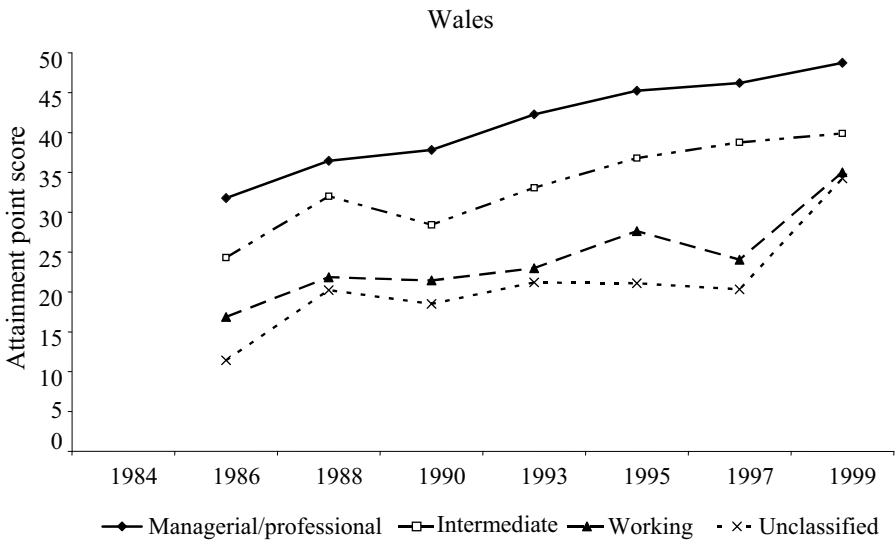
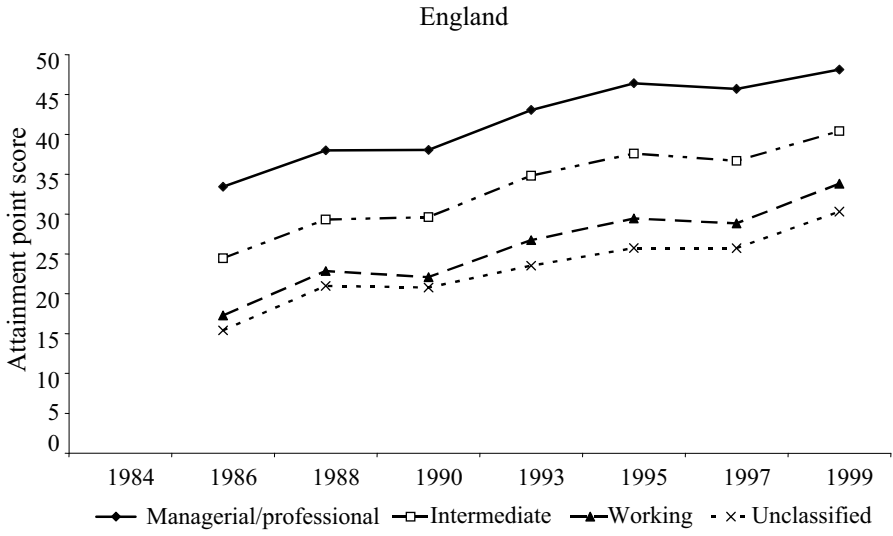
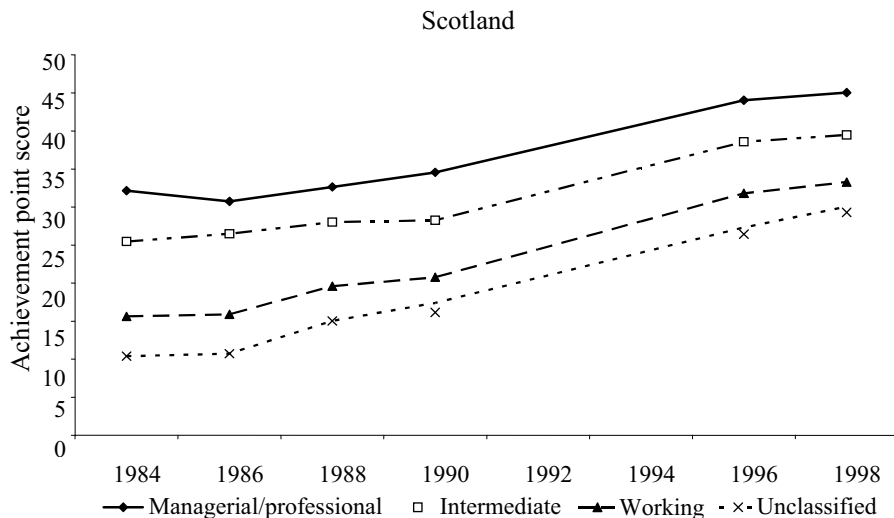


Figure 2.3: Average Attainment Score at 16, by Country and Social Class

Cont: Figure 2.3



In England, the lines remain roughly parallel over much of the period, indicating a stable level of class inequality. Only in the very last cohort, which sat GCSEs in 1999, do the lines move slightly closer together. A similar trend is apparent in Wales, but more erratically with smaller sample numbers. In Scotland, by contrast, Figure 2.3 suggests that class inequalities became slightly narrower over the period. We investigate these trends in more detail in the following sections.

#### *Trends in inequality within the comprehensive sector*

Table 2.1 regresses attainment on gender, social class and cohort among comprehensive-school students in each home country. The 'constant' term shows the average attainment score for the reference category, working-class males, in the reference year, 1988. These scores were similar across the three home countries. In all three countries, females had higher attainments than males, and managerial/professional-class and (to a lesser extent) intermediate-class students had higher attainments than working-class students. Unclassified students had lower average attainments than working-class students. The cohort coefficients show the difference between the average attainment of working-class males (the reference category) in each cohort and the 1988 cohort. The coefficients tend to be negative for the earliest cohorts and increasingly positive for later cohorts, confirming the general increase in average attainments.

The next set of coefficients show gender inequalities within each cohort, again relative to 1988. Negative coefficients identify narrower gender inequalities than in 1988; positive coefficients identify wider inequalities. In each country gender

inequalities became wider over time, but in Wales, with smaller sample numbers, this trend was not statistically significant.

The remaining blocks of coefficients show the difference in attainment associated with each social class in each cohort, relative to working-class attainment, and compared with 1988. Once again, for managerial/professional and intermediate classes negative coefficients identify narrower inequalities than in 1988 and positive coefficients identify wider inequalities. In England, class inequalities were stable over the cohorts from 1986 to 1997. The coefficients for managerial/professional-class students and intermediate-class students tend to increase slightly over the period (indicating widening inequalities relative to working-class students) but none is significantly different from zero. There is thus no evidence of change over the period during which quasi-markets were developed. However, the coefficient for managerial/professional-class students shows a sharp drop in 1999, indicating an abrupt narrowing of class inequalities. There is a similar but smaller (and non-significant) fall in the coefficient for intermediate-class students. A possible explanation is the ‘starting-gun effect’ (Gorard *et al.*, 2003). This is the hypothesis that the working classes take longer to learn the new rules of positional competition created by quasi-markets: class inequalities initially widen but subsequently narrow again when the working classes catch up. However, the starting-gun effect is unlikely to produce as abrupt a change as we see in the 1999 cohort; moreover, the table shows little evidence of the initial widening of inequalities after the starting gun was fired. A second possible explanation is that the narrowing in 1999 reflects the move towards pluralist competition (the ‘school diversity’ agenda). However, once again the abruptness of the change makes this unlikely. Moreover, the appearance of an even larger change between 1997 and 1999 in Wales, where there was no move towards pluralistic competition, makes us favour instead a third explanation, that the change reflects discontinuities in the England and Wales YCS when this was contracted to a new survey organisation in 1999.

Table 2.1: Estimated Difference in Attainment at Age 16 by Cohort, Gender and Social Class among Comprehensive-School Students in each Home Country. (Single-level model)

	England $\beta$	Std. Error	Wales $\beta$	Std. Error		Scotland $\beta$	Std. Error
(Constant)	<b>23.00</b>	0.33	<b>22.47</b>	1.25	(Constant)	<b>22.18</b>	0.41
<b>Cohorts</b>					<b>Cohorts</b>		
1986	<b>-4.63</b>	0.48	<b>-3.76</b>	1.87	1984	<b>-5.24</b>	0.53
1990	-0.03	0.47	0.92	1.63	1986	<b>-4.68</b>	0.54
1993	<b>4.83</b>	0.45	<b>3.52</b>	1.79	1990	-0.75	0.62
1995	<b>8.36</b>	0.47	<b>7.77</b>	1.80	1996	<b>10.02</b>	0.64
1997	<b>7.06</b>	0.47	3.20	1.74	1998	<b>12.32</b>	0.57
1999	<b>13.23</b>	0.51	<b>15.68</b>	1.91			

Cont: Table 2.1

	<i>England</i> $\beta$	<i>Std.</i> <i>Error</i>	<i>Wales</i> $\beta$	<i>Std.</i> <i>Error</i>		<i>Scotland</i> $\beta$	<i>Std.</i> <i>Error</i>
Average effects					Average effects		
<i>Female</i>	<b>2.30</b>	0.30	<b>2.86</b>	1.15	<i>Female</i>	0.68	0.41
<i>Managerial &amp; Prof</i>	<b>14.03</b>	0.39	<b>14.64</b>	1.45	<i>Managerial &amp; Prof</i>	<b>12.32</b>	0.50
<i>Intermediate</i>	<b>6.42</b>	0.40	<b>10.04</b>	1.58	<i>Intermediate</i>	<b>7.92</b>	0.53
<i>Unclassified</i>	<b>-2.85</b>	0.54	-1.44	2.01	<i>Unclassified</i>	<b>-4.68</b>	0.77
Interactions					Interactions		
<i>Female in:</i>					<i>Female in:</i>		
1986	<b>-1.46</b>	0.44	-1.25	1.73	1984	1.01	0.54
1990	0.01	0.42	-0.19	1.53	1986	0.96	0.55
1993	0.73	0.40	0.93	1.62	1990	1.12	0.60
1995	<b>1.05</b>	0.41	1.51	1.61	1996	<b>2.88</b>	0.61
1997	<b>1.17</b>	0.42	1.82	1.62	1998	<b>1.96</b>	0.53
1999	<b>1.35</b>	0.43	0.90	1.71			
<i>Managerial &amp; Prof in:</i>					<i>Managerial &amp; Prof in:</i>		
1986	-0.98	0.56	-0.08	2.20	1984	<b>3.15</b>	0.68
1990	-0.40	0.55	0.42	1.93	1986	<b>1.36</b>	0.68
1993	-0.25	0.52	2.73	2.08	1990	1.13	0.74
1995	0.24	0.54	2.80	2.07	1996	-1.10	0.76
1997	0.43	0.54	<b>5.71</b>	2.05	1998	<b>-1.76</b>	0.66
1999	<b>-2.61</b>	0.57	-2.75	2.18			
<i>Intermediate</i>					<i>Intermediate</i>		
1986	0.05	0.59	-2.68	2.33	1984	<b>1.49</b>	0.71
1990	0.51	0.57	-3.78	2.05	1986	<b>2.35</b>	0.71
1993	0.64	0.54	-1.59	2.22	1990	-0.66	0.79
1995	0.95	0.56	-0.78	2.21	1996	<b>-2.01</b>	0.82
1997	0.82	0.57	3.87	2.19	1998	<b>-2.42</b>	0.72
1999	-1.02	0.60	<b>-4.90</b>	2.33			
<i>Unclassified</i>					<i>Unclassified</i>		
1986	0.46	0.81	-4.34	3.03	1984	-0.89	0.98
1990	0.97	0.75	-2.58	2.64	1986	-0.89	1.02
1993	-1.06	0.70	-0.87	2.88	1990	0.15	1.18
1995	-1.21	0.74	-3.93	2.89	1996	0.48	1.10
1997	-0.38	0.75	-2.09	2.96	1998	1.62	0.99
1999	0.03	0.80	-0.44	3.15			
<i>Sample size</i>	79018		6123			32280	

Notes 1: Reference category is Male, working class in 1988 cohort

2: Estimates shown in bold are statistically significant at the 95% confidence level

The data for Wales show a trend for inequalities between managerial/professional-class and working-class students to widen, although this is statistically significant only in 1997, before narrowing very abruptly (as in England) in 1999. There is a similar trend in inequalities between intermediate-class and working-class students.

In Scotland, by contrast, levels of class inequality tended to fall over the period. The gap in attainment between managerial/professional-class and working-class students, and the gap between intermediate-class and working-class students, both narrowed more or less steadily over the period. Unclassified students also maintained or increased their relative attainment levels over the period (the coefficients increased but were not statistically significant). This increases our confidence that the relative improvement in working-class attainments in Scotland was genuine, and not an artefact of coding practices which artificially inflated working-class attainment in later cohorts by recording lower-attaining working-class students as unclassified instead.

Our confidence in the results is further increased by a replication of Table 2.1 based on attainment scores standardised within each country (table not shown). Scottish students tend to take slightly fewer Standard grades than the number of GCSEs taken by students in England and Wales. The raw attainment score was therefore less differentiated in Scotland, possibly reducing the observed class effect on attainment at the upper levels. However, the analysis of standardised attainment scores, designed to allow for this difference, found the same differential trends in inequality as Table 2.1.

Thus, with the possible exception of the 1999 cohort, the analyses show distinct trends in class inequality in the three home countries of Great Britain: stable inequalities in England, widening inequalities in Wales and declining inequalities in Scotland.

Table 2.2 confirms this interpretation, at least with respect to England and Scotland. It tests for linear time trends in a pooled analysis for all three countries across the same cohorts. Time (or cohort) is represented by a continuous variable: the 1988 cohort, the reference cohort, has a value of zero. The earliest cohort (1984) has the value -4, and the last cohort (1999) has the value +11. The model tests only for linear trends in inequalities and 'irons out' the discontinuity between 1997 and 1999 in England and Wales. (An alternative approach would have excluded the 1999 cohort, or measured the discontinuity using an additional dummy variable, but adjusting the model to fit the data would have provided a less rigorous test of underlying trends.)

Table 2.2: Estimated Changes over Time in Attainment at Age 16 by Gender, Social Class and Home Country, in Comprehensive Schools and All Schools. (Single-level models)

	1. Comprehensive schools		2. All schools	
	$\beta$	Std. Error	$\beta$	Std. Error
(Constant) see note 1	<b>21.54</b>	0.18	<b>22.27</b>	0.18
Female	<b>1.86</b>	0.16	<b>1.17</b>	0.15
Managerial & Professional	<b>13.77</b>	0.21	<b>15.92</b>	0.20
Intermediate	<b>6.77</b>	0.22	<b>7.61</b>	0.21
Unclassified	<b>-2.76</b>	0.30	<b>-1.98</b>	0.29
Time	<b>1.46</b>	0.04	<b>1.47</b>	0.04
Time squared	<b>-0.03</b>	0.00	<b>-0.03</b>	0.00
Time*Female	<b>0.19</b>	0.03	<b>0.24</b>	0.02
Time*Managerial & Prof.	-0.03	0.03	-0.05	0.03
Time*Intermediate	0.00	0.04	0.01	0.03
Time*Unclassified	-0.07	0.05	<b>-0.11</b>	0.05
Wales				
Wales	-0.24	0.65	-0.89	0.65
Wales*Female	0.54	0.60	1.06	0.60
Wales*Managerial & Prof.	<b>1.60</b>	0.77	-0.20	0.77
Wales*Intermediate	1.24	0.81	0.71	0.81
Wales*Unclassified	-1.01	1.06	-1.49	1.06
Scotland				
Scotland	<b>-1.29</b>	0.27	<b>-2.05</b>	0.27
Scotland*Female	-0.17	0.25	<b>0.61</b>	0.24
Scotland*Managerial & Prof.	-0.31	0.31	<b>-2.02</b>	0.30
Scotland*Intermediate	<b>1.76</b>	0.33	<b>1.26</b>	0.32
Scotland*Unclassified	<b>-2.19</b>	0.44	<b>-2.79</b>	0.44
Wales				
Wales*Time	<b>-0.38</b>	0.16	<b>-0.35</b>	0.16
Wales*Time squared	<b>0.03</b>	0.01	<b>0.03</b>	0.01
Wales*Time*Female	0.04	0.10	0.02	0.10
Wales*Time*Managerial &	0.21	0.12	0.22	0.12
Wales*Time*Intermediate	0.16	0.13	0.11	0.13
Wales*Time*Unclassified	0.17	0.18	0.15	0.18
Scotland				
Scotland*Time	<b>-0.44</b>	0.06	<b>-0.48</b>	0.06
Scotland*Time squared	<b>0.07</b>	0.01	<b>0.08</b>	0.01
Scotland*Time*Female	<b>-0.08</b>	0.04	<b>-0.11</b>	0.04
Scotland*Time*Managerial	<b>-0.26</b>	0.05	<b>-0.29</b>	0.05
Scotland*Time*Intermediate	<b>-0.32</b>	0.06	<b>-0.36</b>	0.06
Scotland*Time*Unclassified	<b>0.24</b>	0.07	<b>0.29</b>	0.07
Sample size	117421		135270	

Note 1: Reference category is male, working class, 1988 cohort, England

Model 1 covers comprehensive schools, like Table 2.1. The first block of coefficients describes England, the reference country, and confirms that gender inequalities widened but there was no significant change in class inequalities. The next two blocks of coefficients compare Scotland and Wales in the reference year, 1988, and the final two blocks show differential trends. In Wales the trend in attainment followed a slightly different pattern from England (it increased more among later rather than earlier cohorts, indicated by the time-squared term) but Model 1 does not show a significant widening of class inequalities relative to England. It does, however, show a significant narrowing of class inequalities (and a slower increase in gender inequalities) in Scotland relative to England.

### *Trends in inequality across all types of schools*

The second model in Table 2.2 covers all cohort members, including those from independent and (in England) state-selective schools. By comparing the two models we can address our second research question, which asks if the same conclusions hold if we look at all students and not only those from comprehensive schools.

In England, the reference country, the absolute level of class inequality is substantially greater in Model 2 which includes non-comprehensive schools. However, the trend in class inequality — or more precisely the absence of a trend — is the same. In Scotland and Wales, where many fewer students attended non-comprehensive schools, including these schools in the model made less difference to the overall levels of class inequality. (This is not easy to see in Table 2.2 because England is the reference country.) The key finding is that including non-comprehensive schools in the model makes no difference to our conclusion about the different trend in inequality: there was no significant difference between England and Wales in the trend in social-class inequalities, and class inequalities narrowed in Scotland relative to England.

### *A note on gender*

As we have seen, females had higher average attainments than males, and this gap widened over time, faster in England and Wales than in Scotland. Table 2.2 also shows that the gender gap in England was somewhat narrower across the whole school system (a coefficient of 1.17 for 1988, the reference year) than within the comprehensive sector (a coefficient of 1.86). This was not true of Scotland or (probably) Wales, where gender differences in the comprehensive sector are more representative of the school system as a whole. This may reflect the fact that only in England were there selective state schools as well as private schools. Whatever the explanation, the contrast reminds us that patterns of school organisation have implications for inequalities of gender as well as social class.

A separate analysis, not shown here, shows that the increase in attainment was greatest among females from the managerial/professional SEC, and consequently social class differences widened among females relative to males. This is an important finding which requires further study. Other YCS analyses find that class and gender effects are additive, but do not study these effects over time (Connolly 2006).

However, for the purpose of this chapter the main point to note is that the country differences in class inequalities – the narrowing in Scotland relative to England – occurred among both males and females.

#### *A note on ethnicity*

We have data on ethnicity only for England and Wales. We are therefore unable to test directly whether different trends in social-class inequality across the three countries may reflect changing patterns of ethnic inequality that are associated with social class. However, if the trends discussed above are products of ethnic inequalities this is most likely to affect England, which has the largest ethnic minority population. A further analysis of data for England (not shown) finds that neither the level nor the trend in social class inequality is substantially affected if ethnicity is included in the model. The analysis also shows that (net of social class) students from Indian backgrounds had higher average attainments than whites, Pakistanis had similar average attainments, and blacks, Bangladeshi and ‘other’ ethnic minority students had lower average attainments. This is consistent with other YCS research (Rothon 2005). Only Bangladeshis and the residual ‘other’ category significantly closed the gap with whites over the period.

#### *Area differences within countries*

As discussed above, the strength of market regimes, and their impact on social inequality, may vary across local education markets. Indeed, this variation is one reason why it is difficult to generalise from the empirical research on quasi-markets, much of which is based on local case studies.

This raises the question of whether the national differences in Tables 2.1 and 2.2 merely reflect the different mix of local contexts and consequently of market regimes within each country. Trends within comparable geographical settings, perhaps, might have differed less across countries. We cannot explore this question in detail with the data at our disposal. However, we can repeat the analysis of Table 2.2 for sample members in urban areas, as defined by the Office of National Statistics (2002) and the Scottish Executive (2004). In urban areas the greater size and density of populations make it more likely that a parent will have a realistic choice of school. The differential trend in social-class inequality – the relative narrowing in Scotland relative to England and Wales – was almost identical in urban areas as among the whole sample (table not shown). A more stringent test further restricted the sample to conurbations with a population of more than 600,000. Even among these large conurbations we found the same differential trend in social-class inequalities across countries.

#### *Mechanisms of exclusion*

Our third research question asks if, within the comprehensive sector, there was a different trend across the three home countries in the hierarchy of schools, in within-school social-class inequalities, in social segregation and in contextual effects. Table 2.3



attempts to answer these questions. It summarises the results of multilevel regression models of attainment run separately for each country. A separate intercept was fitted for each cohort in order to estimate school effects over time. The table examines the ‘effects’ of social class and gender at the individual level and it includes a measure of the average social class (SEC) level of pupils in each school, to indicate the contextual effect<sup>4</sup>.

The analyses in Table 2.3 need to be interpreted with caution. They fall well short of a fully-specified model of school effects. They lack key measures of the characteristics of student intakes, such as prior attainment, and they lack data on school quality or processes except for average social class. However these limitations are less important if we use the model primarily to test for trends rather than to measure absolute levels of concepts such as school hierarchy and contextual effects.

### *Hierarchy of schools and contextual effects*

One possible measure of the hierarchy of schools is the variation in ‘value-added’ among schools. The more hierarchical the school system, the greater this variation. Subject to the limitations noted above, this variation is measured by the variance between schools shown near the bottom of Table 2.3. The national differences are in line with our expectations. The variation in value-added was consistently greater in England than in Scotland (the Welsh estimates are too unreliable to draw firm conclusions). However, in none of the three countries was there a clear trend in school variability over time.

The variance between schools is independent of social class — which, both at individual and school levels, is an input variable in our crude school effects model. It does not, therefore, correspond precisely to the concept of school hierarchy in the model of social closure described above, which is correlated with social class. In the analysis in Table 2.3 the concept of school hierarchy is conflated with the contextual effect, that is, with the effect of school average SEC. The coefficient for school average SEC can be understood as a composite of three different effects:

- the effects of individual-level factors, such as prior attainment, that are not adequately represented by social class and gender but which are correlated with school social composition;
- the direct effects of school social composition: that is, ‘genuine’ contextual effects; and
- the effects of other aspects of school ‘quality’ which are correlated with school social composition.

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<sup>4</sup> School average SEC is the average per school and cohort of the normal score of the 4-category NS-SEC measure. The normal scores of NS-SEC were derived within each cohort, so that the school context measure relates to the distribution of social classes within that cohort and is not influenced by changes in the distributions of social classes over time. The average normal scores for each category of SEC are as follows: managerial/professional 0.94; intermediate 0.05; working -0.66; unclassified -1.56.

Table 2.3: Estimated School Differences in Attainment at Age 16, in Comprehensive Schools in each Home Country, (Multilevel models)

	<i>Eng.</i> $\beta$	<i>Std.</i> <i>Error</i>	<i>Wales</i> $\beta$	<i>Std.</i> <i>Error</i>		<i>Scot</i> $\beta$	<i>Std.</i> <i>Error</i>
Cohorts/intercepts					Cohorts/intercepts		
1986	<b>19.13</b>	0.38	<b>19.57</b>	1.48	1984	<b>18.03</b>	0.41
1988	<b>24.55</b>	0.38	<b>24.48</b>	1.47	1986	<b>19.65</b>	0.56
1990	<b>24.74</b>	0.37	<b>24.99</b>	1.10	1988	<b>23.71</b>	0.46
1993	<b>29.25</b>	0.32	<b>27.30</b>	1.38	1990	<b>22.13</b>	0.49
1995	<b>32.70</b>	0.36	<b>31.69</b>	1.48	1996	<b>32.92</b>	0.44
1997	<b>31.35</b>	0.37	<b>28.13</b>	1.37	1998	<b>35.16</b>	0.36
1999	<b>37.25</b>	0.38	<b>39.65</b>	1.37			
Average effects				(see Note 1)	Average effects		
<i>Female</i>	<b>2.25</b>	0.30	<b>2.32</b>	1.15	<i>Female</i>	0.68	0.41
<i>Managerial &amp; Professional</i>	<b>11.51</b>	0.41	<b>12.57</b>	1.53	<i>Managerial &amp; Professional</i>	<b>10.25</b>	0.53
<i>Intermediate</i>	<b>5.07</b>	0.41	<b>8.31</b>	1.61	<i>Intermediate</i>	<b>6.57</b>	0.55
<i>Unclassified</i>	<b>-2.58</b>	0.54	<b>-1.93</b>	2.00	<i>Unclassified</i>	<b>-3.59</b>	0.78
<i>School average SEC</i>	<b>7.88</b>	0.65	<b>7.33</b>	2.94	<i>School average SEC</i>	<b>7.29</b>	0.73
Interactions (ref:1988)					Interactions (ref:1988)		
<i>Female in:</i>					<i>Female in:</i>		
1986	<b>-1.46</b>	0.44	-0.66	1.70	1984	0.97	0.58
1990	0.12	0.41	0.37	1.49	1986	1.06	0.57
1993	0.78	0.40	1.49	1.63	1990	1.13	0.59
1995	<b>1.08</b>	0.42	1.89	1.66	1996	<b>2.93</b>	0.55
1997	<b>1.21</b>	0.43	1.69	1.62	1998	<b>2.09</b>	0.49
1999	<b>1.43</b>	0.42	1.68	1.62			
<i>Managerial &amp; Professional in:</i>					<i>Managerial &amp; Professional in:</i>		
1986	-0.19	0.59	0.53	2.28	1984	<b>2.84</b>	0.76
1990	-0.85	0.56	0.65	1.96	1986	<b>1.28</b>	0.74
1993	-0.22	0.54	2.49	2.26	1990	<b>1.71</b>	0.77
1995	0.30	0.57	2.42	2.89	1996	-0.42	0.73
1997	0.36	0.59	4.26	2.18	1998	-0.80	0.64
1999	<b>-2.19</b>	0.58	-3.39	2.22			

Cont: Table 2.3

	<i>Eng.</i> $\beta$	<i>Std.</i> <i>Error</i>	<i>Wales</i> $\beta$	<i>Std.</i> <i>Error</i>		<i>Scot</i> $\beta$	<i>Std.</i> <i>Error</i>
<i>Intermediate in:</i>					<i>Intermediate in:</i>		
1986	0.43	0.59	-1.69	2.33	1984	1.47	0.76
1990	0.15	0.56	-3.00	2.03	1986	2.17	0.76
1993	0.61	0.55	-0.99	2.29	1990	0.01	0.80
1995	1.06	0.58	-0.29	2.33	1996	-1.36	0.76
1997	0.88	0.59	3.60	2.22	1998	<b>-1.52</b>	0.67
1999	-0.76	0.58	<b>-4.75</b>	2.26			
<i>Unclassified in:</i>					<i>Unclassified in:</i>		
1986	0.65	0.80	-3.41	3.98	1984	-1.02	1.04
1990	1.23	0.72	-1.45	2.56	1986	-1.08	1.06
1993	-0.21	0.70	-0.09	2.88	1990	-0.04	1.18
1995	-0.40	0.75	-3.38	2.98	1996	-0.12	1.02
1997	0.53	0.77	-0.69	2.94	1998	0.75	0.92
1999	0.86	0.78	0.73	2.96			
<i>School average SEC in:</i>					<i>School average SEC in:</i>		
1986	<b>-3.18</b>	0.87	-4.20	3.53	1984	1.71	1.10
1990	1.52	0.91	-0.12	3.49	1986	1.20	1.09
1993	<b>-2.62</b>	0.76	-2.78	3.36	1990	<b>-2.85</b>	1.09
1995	<b>-2.38</b>	0.78	-1.82	3.47	1996	<b>-2.95</b>	0.99
1997	<b>-3.17</b>	0.76	-1.35	3.44	1998	<b>-2.79</b>	0.98
1999	<b>-3.35</b>	0.78	-1.94	3.33			
<i>Variance between schools</i>					<i>Variance between schools</i>		
1986	16.88	1.86	16.11	7.53	1984	8.30	1.75
1988	13.56	1.57	15.17	6.39	1986	8.24	1.71
1990	14.36	1.55	6.95	3.55	1988	7.11	1.66
1993	16.95	1.62	15.66	8.05	1990	12.38	2.21
1995	16.97	1.79	15.47	7.60	1996	6.92	1.46
1997	16.89	2.00	34.72	9.58	1998	8.79	1.19
1999	17.66	1.81	8.79	6.59			

Cont: Table 2.3

	<i>Eng. <math>\beta</math></i>	<i>Std. Error</i>	<i>Wales <math>\beta</math></i>	<i>Std. Error</i>		<i>Scot <math>\beta</math></i>	<i>Std. Error</i>
<i>Variance between pupils</i>					<i>Variance between pupils</i>		
1986	224.24	3.39	257.88	14.65	1984	250.69	4.63
1988	235.81	3.25	274.91	13.59	1986	234.91	4.42
1990	201.57	2.82	240.69	10.25	1988	199.06	4.15
1993	221.58	2.83	279.40	14.75	1990	182.83	4.22
1995	235.93	3.28	311.43	15.53	1996	135.93	3.16
1997	245.82	3.54	257.97	13.41	1998	127.55	2.26
1999	195.62	2.99	222.46	12.95			
<i>% variance between schools</i>					<i>% variance between schools</i>		
1986	7.00		5.88		1984	3.20	
1988	5.44		5.23		1986	3.39	
1990	6.65		2.81		1988	3.45	
1993	7.11		5.31		1990	6.34	
1995	6.71		4.73		1996	4.84	
1997	6.43		11.86		1998	6.45	
1999	8.28		3.80				
Sample size	79018		6123			32280	

## Notes

1: Reference category is male, working class in 1988 cohort, attending school with average SEC.

2: Estimates for school average SEC show the effect of one standard deviation above mean

If we could assume that the first of these effects has not become more or less important over time then we would be able to interpret any increase in the school average SEC coefficient as support for the model of social closure outlined above – as a strengthening of the class-related hierarchy of schools and/or of contextual effects.

However, Table 2.3 provides no such evidence. In England the coefficient for school average SEC increased steadily over the 1986, 1988 and 1990 cohorts and then fell abruptly in 1993, remaining steady for the rest of the 1990s. The fall in 1993 may be connected with a change in the YCS survey design in 1993, when the sample ceased to be clustered by school. It is both too abrupt and too early to be plausibly attributed to the 1988 Act. In Wales there is evidence of a similar trend, but it is not statistically significant. In Scotland the coefficient declined steadily during the 1980s (including 1988, the reference cohort) and remained stable during the 1990s.

*Within-school class inequalities*

The social-class terms in Table 2.3 show the within-school inequalities, net of any contextual effects. These are broadly consistent with the trends described above in our discussion of Table 2.1. In Scotland working-class attainment rose relative to both managerial/professional and intermediate classes over the period. In England and Wales there was no significant change in within-school class inequalities up to 1997; in 1999 inequalities between the managerial/professional and working classes fell significantly in England and Wales, and those between the intermediate and working classes fell significantly in Wales.

*Social segregation*

Analyses of these data to explore changing patterns of school segregation are reported elsewhere (Croxford and Paterson, 2006). Three measures were used: a segregation index, an isolation index, and the variance ratio based on a multilevel model, and each measure is applied to the working class and to the managerial/professional class. Excluding Wales, where smaller sample numbers contributed to more erratic patterns, the results were as follows:

- Working-class segregation: relatively stable trend in England with an increase in 1990-93 (possibly due to sampling changes); upward trend followed by downward trend in Scotland;
- Managerial/professional-class segregation: stable trend in England; slight decline in Scotland;
- Working-class isolation: slight upward trend in England; decline in Scotland;
- Managerial/professional-class isolation: slight rise, then levelling-off in England; similar trend in Scotland;
- Working-class variance ratio: downward trend in England interrupted by an increase between 1993 and 1995; slight downward trend in Scotland;
- Managerial/professional-class variance ratio: downward trend in England interrupted by an increase between 1993 and 1995; stable trend in Scotland.

On balance, these suggest a relative trend for segregation to fall in Scotland compared with England. The timing of changes in the variance ratios suggests that the 1988 Education Reform Act increased segregation in England. But the contrasting results from the other measures make us cautious about interpreting these findings.

## CONCLUSION

Our first research question asked if the home countries had different trends in social-class inequalities among comprehensive-school students. In the cohorts up to 1998, we found a stable level of class inequality in England, declining inequality in Scotland and an apparently increasing trend in inequality in Wales, although the Welsh trend was not statistically significant in all analyses. We found the same divergent national trends among urban areas, and among large conurbations. In 1999

we found an abrupt fall in class inequalities in England and Wales, although we suspect that this may be an artefact of changed survey procedures.

Our second research question asked whether the same conclusion found within the comprehensive sector applied to inequalities across all secondary students. In England the observed levels of class inequality increased when we included state-selective and independent schools in the analysis, but this did not affect our conclusions about the trends in inequality and how they differed across countries.

Our third set of questions asked whether there were different trends, in the three home countries, in the hierarchy of comprehensive schools, in contextual effects, in within-school inequalities and in social segregation. Our answers are less definitive, partly because concepts such as hierarchy and contextual effects are imperfectly modelled in our data, and partly because they are affected by 'noise' due to small sample numbers and changes in survey design. We found greater variability in school 'value-added' in England than in Scotland, in line with expectations, but we found no evidence of divergence in school variability. The contextual effect of schools' social composition became weaker in Scotland during the 1980s; in England contextual effects appeared to become first stronger and then weaker, but some of this may have been a survey-design effect. Trends in within-school inequalities matched the national patterns described above in respect of the first research question. Different measures of social segregation (or isolation) yield different empirical conclusions about relative trends, but some measures suggest a decline in segregation in Scotland relative to England.

And so to our final research question: what can we conclude about the impact of market regimes on social-class inequality?

A possible interpretation of our analysis places the emphasis on what is probably our strongest finding: the narrowing of social-class inequalities in Scotland relative to England. Over a period of policy divergence, when England developed a strong market regime while Scottish policy changed much less, there was a parallel divergence in levels of social-class inequality. This seems to provide *prima facie* evidence that strong market regimes generate higher levels of inequality, especially in view of the rationale of our 'home international' analysis, namely that in the relatively homogenous context of Great Britain other sources of changing inequalities would be constant across the three home countries. However, we cannot rule out the possibility that the trends in inequality differed for reasons unrelated to market regimes. For example, the narrowing of inequalities in Scotland may be partly attributable to the reforms of curriculum and assessment associated with the introduction of Standard grades (Gamoran 1996), although the parallel introduction of GCSEs in England and Wales did not have the same effect. And there are several possible objections to an interpretation which attributes the different trends in inequality to different market regimes.

In the first place, it does not explain why Wales, with a rather more muted development of a market regime, experienced the same trend in inequalities as England (and in some analyses, a relative widening of inequalities). However, many of the market measures of the 1980s and 1990s, including the 1988 Act, applied to Wales as well as to England. Welsh policy has diverged from English policy since the National Assembly for Wales was established in 1999; but before that date the

main divergence was in respect of school diversity rather than other quasi-market policies. Moreover, our data for Wales are less reliable than for England or Scotland. So the fact that Wales and England do not differ significantly in many of our analyses is not, in itself, sufficient reason to reject a conclusion that markets promote inequality.

A second possible objection points out that there was least evidence of change in class inequalities in England, where there was most change in market regimes. Conversely there was most evidence of a change in inequality in Scotland, where market regimes changed least. If market regimes were the main determinant of class inequalities, should we not have expected an increase in inequalities in England and a relatively stable trend in Scotland? However, theories of positional competition see education markets as a means of maintaining class inequalities in a changing social environment, not necessarily a means of increasing them. The market regime may have been the mechanism by which the middle class in England maintained its relative advantage, and resisted the Scottish trend towards narrowing inequalities.

A third possible objection is that the timing of changes in inequality does not coincide very closely with the policy changes to which they are attributed. Here we have two difficulties: on the one hand, the survey data do not provide reliable estimates of cohort-on-cohort changes; on the other hand, the time lags between policy change and outcomes are uncertain and variable. The evidence is strongest if we conceptualise the policy divergence as a continuous process over the whole period covered by the study. But it might be argued that the divergence in market policies only became pronounced with respect to the later cohorts in our study; the divergence in inequality among the earlier cohorts must have been caused by something else. It might also be argued that the apparent narrowing of inequalities in England and Wales among the 1999 cohort was a consequence of a strong market regime, delayed by the starting-gun effect. We think this explanation is improbable, but we cannot conclusively reject it.

A fourth objection is that our attempts to test the hypothesised 'mechanisms' of social closure failed to provide much support for the model outlined at the beginning of this paper. We did not find evidence of a stronger impact of quasi-markets in urban areas, as the model might have predicted. We found no evidence of a relative increase in school variability in England relative to Scotland. Some of the segregation analyses suggest that markets increased segregation, but others do not. Contextual effects appeared to decline in Scotland, but this occurred during the 1980s and does not readily support the view that market regimes increased contextual effects. Indeed, declining contextual effects in Scotland could possibly be a consequence of the weak parental-choice regime introduced by the Act of 1981.

Our analysis does, however, show that the differential trend in social inequality was primarily a result of different trends in inequalities within schools, independent of any trend towards hierarchy or segregation. This is an important finding. Much of the debate around markets has assumed the primary importance of school membership for attainment and therefore for inequalities. That is, it has focused on school hierarchy and segregation, on the implicit assumption that the school which a student attends is the principal determinant of attainment and that if the market has increased inequalities this is primarily by enhancing middle-class access to

'effective' schools and by enabling schools which serve middle-class students to become relatively more 'effective'. This assumption corresponds to mechanisms (2) and (3) in the model outlined above. However, the debate has sometimes overlooked other mechanisms such as (4) and (7). Mechanism (4) predicts that the pressures of competition encourage the system as a whole to become more 'middle-class friendly': that within all schools it promotes an ethos and hidden curriculum that reward the social and cultural capitals that middle-class students are more likely to possess. Mechanism (7) predicts that competition, fragmentation and the erosion of democratic control restrict the system's capacity for collective action to promote equality. Our data provide stronger support for these two mechanisms than for the others in the model outlined earlier; however, these two mechanisms are those which are hardest to connect specifically to market policies, rather than to other aspects of the policy and social environment of education.

We conclude that our evidence points to a link between changing market regimes and levels of social inequality, but it does not conclusively demonstrate the nature of that link. A more cautious interpretation is that the stronger move to markets in England, and the resistance to such moves in Scotland, are themselves the product of broader political differences, market conditions and/or educational cultures which may have influenced changing patterns of inequality through other mechanisms instead of, or as well as, those of the market. In other words the policy divergence and the divergence in inequality may be connected, not as cause and effect, but as joint outcomes of a deeper set of social forces.

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### 3            The Effects of Generalised School Choice                  on Achievement and Stratification

## Evidence from Chile's Voucher Program

*Chang-Tai Hsieh and Miguel Urquiola*

#### INTRODUCTION

A central argument in the school choice debate is that public schools are inefficient local monopolies, and that educational quality would improve dramatically if only parents were allowed to freely choose between schools. For example, Hoxby (2003) asks, "What is the range of productivity over which choice could cause productivity to vary? Recent history suggests that school productivity could be much higher than it is now — 60 per cent to 70 per cent higher." Two arguments underlie this view. First, there is a widely held belief that private schools are more effective than public schools. Although the evidence from quasi-experiments with vouchers is mixed, if private schools are in fact more efficient, then school choice could raise students' achievement merely by facilitating their transfer to the private sector.<sup>5</sup> A second, perhaps even more compelling argument for choice comes from the notion that organisations respond to incentives. Therefore, by correctly aligning the incentives public schools face, choice would force their seemingly ossified bureaucracies to improve.

This paper assesses these arguments by examining the impact of a comprehensive school voucher program introduced in Chile. Specifically, in 1981 Chile's government began to provide vouchers to any student wishing to attend a private school, and to tie the budget of public schools to their enrolment. We show that this program, whose essential features remain unchanged 20 years later, created a dynamic educational market: more than a thousand private schools entered the market, and the private enrolment rate increased from 20 per cent to 40 per cent by 1988, surpassing the 50 per cent mark in many urban areas. The Chilean case thus provides a unique opportunity to analyze the transition from a centrally controlled public school system, to one in which all families can freely choose between public and private schools.

To measure the effects of the competitive forces unleashed by the voucher program, we exploit the fact that it had a greater impact in communities with larger markets, and in those where the demand for private schooling appears to have been

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<sup>5</sup> See Ladd (2002) and Neal (2002) for recent surveys of the large literature on school vouchers.

greater. For example, from 1981 to 1988, the private enrolment rate grew by 11 percentage points more in urban than in rural communities.

As long as this differential impact is driven by community characteristics that are fixed over time, we can measure the impact of the voucher program by comparing the change in educational outcomes in wealthier urban communities, to that in communities where private schooling increased less. Using this approach with panel data for roughly 150 communities in Chile, we consistently fail to find evidence that school choice improved average academic outcomes.<sup>6</sup> Specifically, we find that average test scores did not rise any faster in communities where the private sector made greater inroads, and that average repetition and grade-for-age measures worsened in such areas (relative to other communities).

This evidence thus suggests that school choice did not improve average schooling outcomes in Chile. However, a natural alternative explanation is that the reallocation of students did raise achievement, but that these gains were masked by pre-existing negative trends in communities where the private sector grew by more. We cannot rule out this possibility, but we provide two pieces of evidence that are inconsistent with it. First, we show that our estimates do not change when we introduce a battery of controls for pre-existing and concurrent trends, nor when we use a number of pre-program community characteristics — such as the initial population, urbanisation rate and degree of inequality — as instruments for the differential impact of the voucher program. Admittedly, the controls we use may not capture unobservable trends in school quality and the instruments may not be ideal, but it is still puzzling that we continue to find no evidence that choice improved schooling quality.

Second, we explore another way to measure whether school quality has improved in Chile, one that does not rely on the differential impact of the voucher program across markets. Namely, we compare the performance of Chilean students in international tests in science and mathematics (widely known as TIMSS), in which Chile participated in 1970 and 1999. This comparison indicates that despite nearly two decades under an unrestricted school choice regime, the performance of the median Chilean student has not improved relative to that of the median student in other countries.<sup>7</sup>

This collective body of evidence presents an enormous puzzle. How can we reconcile it with our instinct that when parents are able to choose between schools, they will select the most effective ones, and that schools should respond to this pressure? Again, it is possible that our estimates are biased by unobserved trends in schooling outcomes. However, an alternative explanation is that when parents are allowed to choose freely between schools, they select those that provide “good” peer groups for their children, which might not necessarily be the most productive. In turn, schools might respond by competing to attract better students, rather than by

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6 As described later in the paper, we define a community (or school “market”) as a Chilean municipality.

7 In addition to Chile, twelve other countries participated in TIMSS in 1970 and 1999. As we document below, after controlling for variables such as per capita GDP growth, changes in enrolment rates and educational spending per student, the performance of the median Chilean student appears to have worsened slightly between 1970 and 1999.

raising their productivity. Both forces are obviously complementary, and although they will not necessarily improve average school quality, they will tend to result in more stratification between schools.

We provide suggestive evidence that this appears to have happened in Chile — that the main effect of unrestricted school choice was an exodus of “middle-class” students from the public sector. Specifically, we find that in communities where private schools grew more, there is a greater decline in the socioeconomic status (SES, measured by parental schooling and income) of public school students relative to the community average. In addition, we show that the loss of these students had a major effect on academic outcomes in the public sector. Namely, the performance of public schools (measured by test scores and repetition rates relative to the community average) worsened more in markets where the voucher program had a larger effect.

The rest of the paper proceeds as follows. We begin by reviewing the institutional details of Chile’s voucher program. We then describe the challenges evaluating the impact of school choice presents, and discuss our empirical approach. Finally, we assess how choice affected achievement and sorting across communities in Chile.

#### CHILE’S SCHOOL VOUCHER PROGRAM: A BRIEF OVERVIEW

In 1981, as part of the Pinochet government’s sweeping market-oriented reforms, Chile introduced a nationwide school voucher program. The easiest way to explain this reform is to discuss how it modified the manner in which schools were governed and funded. Before the reforms, there were three types of schools in Chile:

1) Fiscal schools. These public schools were controlled by the national Ministry of Education, which was responsible for all aspects of their operation. It hired and paid teachers, maintained facilities and designed the curriculum. In 1981, 80 per cent of all students were in such institutions.

2) Unsubsidised private schools. These private institutions did not receive public funding. They charged relatively high tuition fees and catered primarily to upper income households. Prior to the reforms, they accounted for about 6-7 per cent of enrolments.

3) Subsidised private schools. These institutions did not charge tuition, received public subsidies and were generally religious.<sup>8</sup> The size of the subsidy they received depended on the government’s fiscal condition, but averaged 50 per cent of nominal per-student spending in the fiscal schools. This aid was supposed to be disbursed at the end of the school year, but was typically delayed by several months, and was therefore eroded by inflation.<sup>9</sup> Prior to the reform, these schools accounted for 15 per cent of enrolments.

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<sup>8</sup> Espinola (1993) states that in 1970, 53 per cent of private schools were Catholic and the remaining were Protestant or run by private foundations.

<sup>9</sup> See Schiefelbein (1971). Inflation averaged 5.2 per cent per month in the 1970s. Assuming that public school teachers are paid every month, the real value of the stipend would be only 35 per cent of real per-student expenditures in the public sector if the stipends were paid on

The 1981 reforms sought to create a nationwide voucher program with financial incentives for both public and private institutions.<sup>10</sup> This initiative had three main components:

1) Decentralisation of public schools. Fiscal schools were transferred from the Ministry of Education to roughly 300 municipalities or *communes*, such that they became known as municipal schools. The contract between the Ministry and the national teachers' union was abrogated, and public school teachers had to either transfer to municipal schools as common public employees, or resign and reapply for teaching jobs as regular private sector workers. To encourage the latter, the Ministry offered substantial severance payments.

2) Public school funding. Municipal schools continued to be funded centrally, but municipalities started to receive a per-student payment for every child attending their schools. As a result, enrolment losses came to have a direct effect on their education budgets.

3) Public funding for private schools. Most importantly, (non-tuition charging) subsidised private schools began to receive exactly the same per-student payment as the municipal schools.<sup>11</sup> These payments were distributed on a monthly basis, and their initial level was set 30 per cent higher than the pre-1981 average spending per student in the public sector. To distinguish these institutions from the subsidised private schools that existed before the reforms, we will call them voucher private schools.<sup>12</sup> These retained wide latitude regarding student selection policies (public schools can only legally turn away students when oversubscribed), and were allowed to receive outside donations. They were not permitted, however, to charge tuition.<sup>13</sup>

Tuition-charging private schools mostly continued to operate without public funding. While they could have stopped charging tuition and started to accept vouchers, these elite institutions in general chose not to do so.

Finally, because voucher programs are often short-lived, it is worth mentioning that the essential features of this system have remained in place over the last 20 years. The centre-left coalitions in power since 1990 have chosen to focus their efforts on channeling additional resources to *vulnerable* schools, increasing real educational spending and teacher salaries, and financially rewarding schools with high test scores.<sup>14</sup> Nevertheless, the core of the system — the per-student voucher

time (at the end of the school year), and 26 per cent if the payments were delayed by 6 months.

10 For further discussion of the school choice reforms in Chile, see McEwan (2000) and McEwan and Carnoy (2000).

11 The size of the voucher payment each school receives varies according to: 1) the educational level at which it operates, 2) whether it offers special programs, and 3) its distance from urban centers. Importantly, a given private school receives the same payment as a municipal school with similar characteristics.

12 In Chile, they continue to be known as subsidised private schools.

13 This restriction was largely eliminated in the mid-1990s, but was in place for essentially all of the periods we will analyze below.

14 These are mainly policies aimed at: i) the worst performing schools—the P900 (Programa de las 900 Escuelas) program, ii) the entire K-12 system—the MECE (Programa de Mejoramiento de la Calidad y Equidad de la Educación Preescolar y Básica) initiative, iii) rural schools—the MECE-Rural, and iv) rewarding teachers in schools that perform well—the

payments and the freedom to attend any school, religious or not — has been left intact.

### THE INDUSTRIAL ORGANISATION EFFECTS OF SCHOOL CHOICE

These reforms led to significant changes in the Chilean educational market. Figure 3.1 shows that the public sector's enrolment share hovered around 80 per cent throughout the 1970s, but fell rapidly after 1981, dipping below the 60 per cent level by 1990. The figure also describes the evolution of private schools' participation, which beginning in 1981, can be decomposed into that of voucher and tuition-charging schools. This makes clear that the rise of private enrolment in the 1980s is almost entirely due to the growth of voucher private institutions. By 1986, only five years after the per-student payments were introduced, these schools' market share crossed the 30 per cent level, doubling relative to that of the pre-1981 subsidised private sector. In contrast, the participation of the "elite" private schools remained roughly constant over the 1980s, and experienced a gradual but sustained increase during the 1990s.

This transfer of students was accompanied by a large reallocation of resources towards private schools. First, because of voucher financing, the 20 percentage point enrolment shift means that a corresponding percentage of the Ministry of Education's school-related operational expenditures was reallocated to private schools. Second, although the transfer of teachers was more gradual than the shift in enrolment, by 1990 the fraction of teachers working in public schools had also fallen by 20 percentage points.

The aggregate trends in Figure 3.1 conceal considerable variation in the growth of the private sector across different educational markets. Using Chile's approximately 300 communes as proxies for such markets, Figure 3.2 (panel A) presents kernel densities of the change in private enrolment ratios from 1982 to 1996 for all communes in Chile, and for a subset of urban communes.<sup>15</sup> As can be seen, there was a substantial heterogeneity in the impact of the school voucher program across communes, although it was generally greater in urban communities.

Table 3.1 provides further information on the characteristics of the communities that were more affected by the availability of vouchers.<sup>16</sup> The first four columns indicate that the voucher program had a larger effect in urban and populated communes. For example, our point estimates indicate that the private enrolment rate grew by 11 percentage points more in a fully urban than in a wholly rural community. The next two columns suggest that the voucher program also had a

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SNED (Sistema Nacional de Evaluación del Desempeño de los Establecimientos Educativos Subvencionados). Here we focus on the 1980s because it is the period in which the voucher program had its largest effects and was the key educational intervention, with the government refraining from compensatory initiatives.

<sup>15</sup> Defined as those with urbanisation rates above 80 per cent and populations above ten thousand.

<sup>16</sup> We defer a discussion of the data sources until Section 5.1. Descriptive statistics are in Table 3.1.

larger effect in more unequal communities, where we proxy inequality by the inter-quartile range in years of schooling among working-age adults.

Over time, such differences have produced substantial cross sectional variation in private enrolment, as described in Figure 3.2 (panel B), which presents density estimates of private participation in 1996.<sup>17</sup> In roughly 40 per cent of the urban communes the public sector has become a minority player, and in extreme cases, it accounts for only 20 per cent to 25 per cent of all enrolments. Further, this supply response was not limited to growth in pre-existing schools. Figure 3.3 shows that more than 1000 private schools were created from 1982 to 1985, increasing their number by almost 30 per cent.

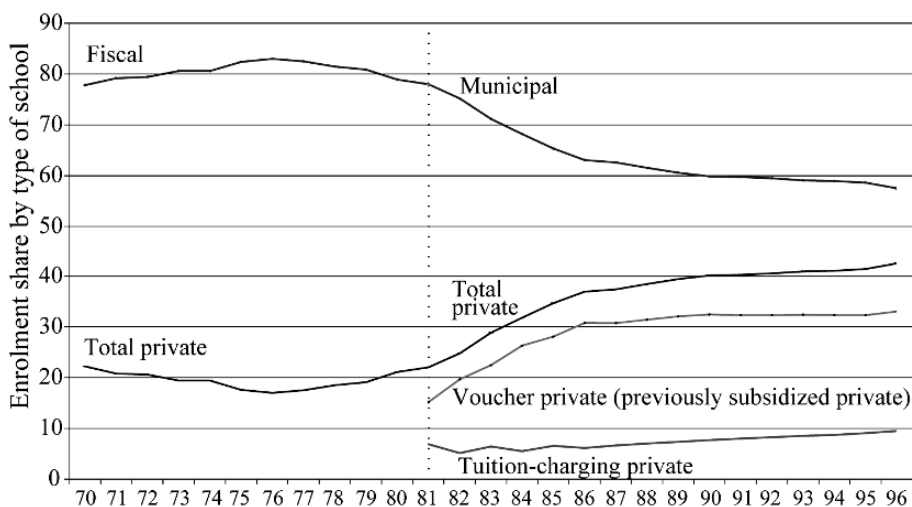


Figure 3.1: National Enrolment Shares by Sector, 1970-1996. Data assembled from several issues of the Ministry of Education's *Compendio Estadístico*

<sup>17</sup> As all other data presented henceforth, this figure refers only to the primary school sector (grades 1-8).



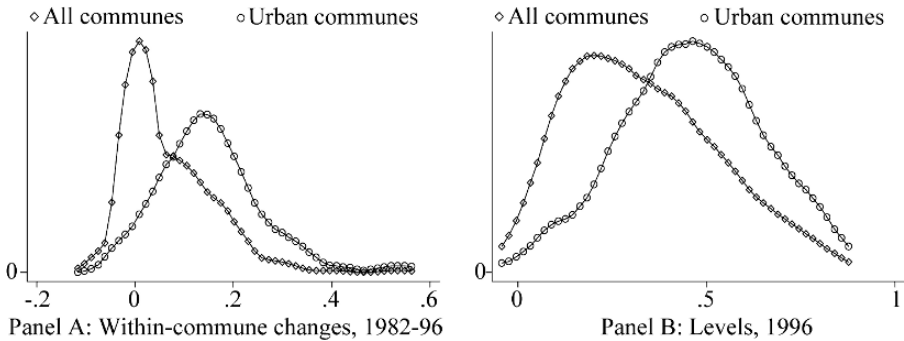


Figure 3.2: Private Enrolment among Communes

Note; Panel A is based on administrative information, data sources (8) and (10) in Table 3.7. It covers all communes in Chile. Panel B refers to communes with positive private enrolment.

A notable fact is that despite extensive private entry and sustained declines in public enrolments, the aggregate number of municipal schools has barely fallen. Municipal officials seem to have been unable or unwilling to close public schools. This leaves open the possibility that public schools did not face strong incentives to compete. This is reinforced by the fact that for these schools, revenue losses are mediated by municipal educational budgets, which makes it possible for them to lose students without automatic consequences for their resources. If indeed incentives were completely blunted for this sector, the gains from school choice would be entirely due to the reallocation of students to the (presumably) more productive private sector.

Finally, we note two interesting differences between the subsidised schools which existed prior to 1982 (which we label incumbent voucher schools) and those that entered thereafter (which we label voucher entrants). First, while the incumbent voucher schools are almost entirely religious institutions, the entrants are largely for-profit. For example, 84 per cent of the entrants observed in 1988 are profit-seeking institutions.<sup>18</sup> Second, the entrants generally attract students from lower socioeconomic backgrounds. For example, students in the new voucher schools come from families with less schooling and lower incomes, and have lower test scores than those in the incumbent voucher schools.<sup>19</sup>

<sup>18</sup> This number is from a sample of communes for which we have a panel of schools from 1982 to 1988. The communes in this panel account for about 70 per cent of total enrolment in the country. See Section 5.1 for details on the data.

<sup>19</sup> Using the Chilean household survey (CASEN), we find that parents in the incumbent voucher schools have 1.35 (S.E.: 0.186) more years of schooling and 0.168 log points higher incomes (S.E.: 0.038) than parents in the entrant voucher schools. Additionally, SIMCE data reveal that in 1988, incumbents' average scores were 0.35 standard deviations higher in math, and 0.4 standard deviations higher in language. See Section 5.1 for additional information on the data.

Table 3.1: Explaining the Private Sector's Growth, 1982-1988

Independent variable- 1982 observation of:	Dependent variable 1982-88 change in private enrolment <sup>a</sup>							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Urbanisation rate</i> <sup>b</sup>	0.11*** (0.01) [0.45]	0.08*** (0.02) [0.33]					0.09*** (0.01) [0.37]	0.04* (0.02) [0.16]
<i>Population</i> <sup>b</sup>			0.67*** (0.19) [0.21]	0.54*** (0.11) [0.17]			0.40*** (0.07) [0.13]	0.40*** (0.06) [0.13]
<i>Inter-quartile range in years of schooling</i> <sup>b</sup>					0.16*** (0.02) [0.34]	0.18*** (0.04) [0.39]	0.06** (0.03) [0.13]	0.13*** (0.04) [0.28]
<i>Controls: 1982-1988 changes in population, years of schooling among adults, and income</i> <sup>c</sup>	No	Yes	No	Yes	No	Yes	No	Yes
<i>N</i>	297	171	297	171	297	171	297	171
<i>R</i> <sub>2</sub>	0.204	0.242	0.046	0.205	0.121	0.263	0.232	0.310

Notes: \*, \*\*, and \*\*\* indicate significance at the 10 per cent, 5 per cent, and 1 per cent level, respectively. Huber-White standard errors are in parentheses. Brackets contain the proportion of a standard deviation change in the dependent variable brought about by a one standard deviation increase in the independent variable. Sample sizes vary due to the addition of controls with missing observations.

<sup>a</sup> Based on administrative information, data sources (8) and (9), as described in Table 3.7.

<sup>b</sup> Calculated using census micro and summary information, data sources (16) and (17). Urbanisation is expressed as a proportion; population is in units of 10 million; and the inter-quartile range is in units of 10 years of schooling.

<sup>c</sup> Controls for concurrent trends are the 1982-1992 change in population (from data sources 17 and 18), and the 1982-1996 change in mean years of schooling and imputed labour income among adults (from census and household survey information, sources 13 and 16).

## MEASURING THE EFFECTS OF SCHOOL CHOICE

There are two issues one has to address to credibly measure the effects of school choice on educational outcomes. The first is how to separate the effects that operate through enhanced school productivity, from those that operate through sorting. The second concerns the need for an adequate control group or counterfactual. This section addresses these issues in turn.<sup>20</sup>

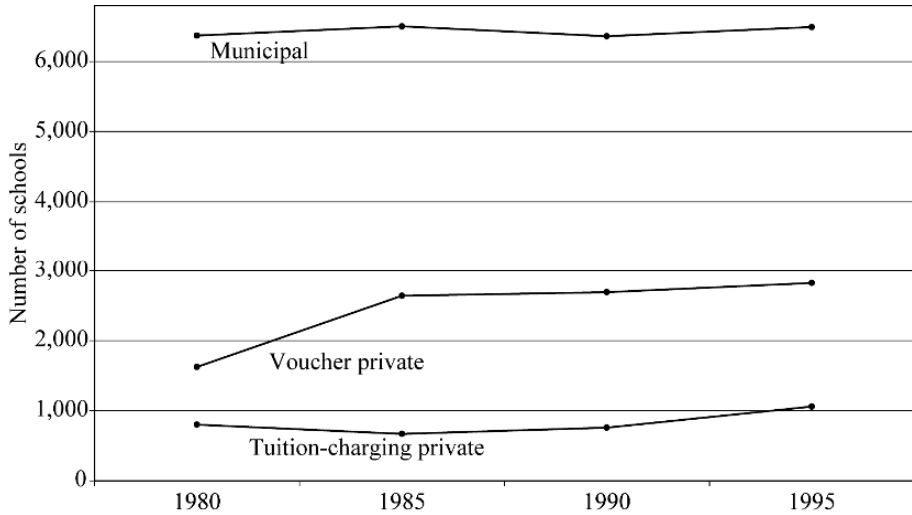


Figure 3.3: Number of Schools by Sector, 1980-1995. Data assembled from several issues of the Ministry of Education's Compendio Estadístico

#### *Disentangling sorting from changes in productivity*

A central issue in measuring the effect of school choice is that it can simultaneously affect both schools' productivity and the extent of sorting or stratification observed in the educational system. If it influences schooling outcomes through both of these channels, then it is nearly impossible to disentangle their respective magnitude.

To illustrate this point, put aside for now the endogeneity of competition. That is, imagine a setting in which the extent of private school availability is exogenously assigned across markets, and consider trying to measure the two sources of productivity gains from school choice: the possibility that private schools are more effective (so that aggregate achievement improves simply by shifting students into them), and the possibility that competition prompts public schools to improve.

<sup>20</sup> A formal version of the arguments in this section is available in Hsieh and Urquiola (2003), which also contains more extensive references to the school choice literature. For models of competition between schools, see also Epple and Romano (1998) and Mankiw (1992).

A first problem is that if cream skimming takes place, even if competition forces public schools to improve, their average academic outcomes might still fall simply because the best students leave for private schools. On the other hand, if private schools attract lower-income households, then public school performance might improve simply because the lowest performing students have exited them.<sup>21</sup> Put simply, when choice leads to sorting, there is simply no instrument that would allow one to isolate the effect of choice on the public sector's productivity.

A second problem arises if either type of sorting takes place and additionally, peer effects are important. In this case, it is difficult to measure whether students that switch to private schools improve because private schools are more productive, or simply because they now interact with better peers. This matters because the overall peer quality in a community is fixed, so if there is no private productivity advantage, the gain to students shifting into private schools may come at the expense of the students who remain in the public sector.

In short, as long as choice also leads to sorting, one will generally not be able to separately measure the two potential sources of productivity gains from school choice.<sup>22</sup> What we can do is to approximate a weighted average of these two productivity effects by measuring the average change in academic outcomes of all students in a given community. This is not a perfect measure because it also encompasses the net peer effects of sorting induced by school choice. Nonetheless, the key advantage is that it nets out the *direct* effect of changes in each sector's student composition.

#### *Empirical implementation and endogenous private entry*

Thus far, our discussion suggests that to adequately study the productivity effects of choice, one has to look at its effects at the aggregate market level, and preferably in situations in which it has produced substantial and sustained changes in the educational market. From this point of view, the Chilean experience is very valuable. On the other hand, we have focused on measuring the effects of choice in situations in which the private enrolment share is as good as randomly assigned. Such an experiment would be very difficult to implement, and was not carried out in Chile, where the voucher program was introduced across the entire country at once. The Chilean case still offers empirical leverage, however, since in response to this program, the private sector grew substantially more in some markets.

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21 Later in the paper, we will provide suggestive evidence that "cream skimming" is much closer to what happened in Chile, where the voucher program seems to have led to an exodus of "better" students from the public sector. Of course, this need not be the case. In the U.S., for instance, choice programs might attract lower-income households unable to settle into good districts or catchment areas. For instance, Bettinger (1999) provides suggestive evidence that in Michigan lower-income students were the ones that took advantage of charter schools. The bottom line is that either type of sorting will complicate the analysis.

22 One could narrow the bias due to sorting with detailed data on students' background, but there is still the obvious problem posed by unobservable characteristics potentially correlated with academic outcomes.

This differential response is endogenous to the characteristics of a community, but as long as these characteristics do not change over time, one can difference them away by comparing the change in outcomes in a given community with the change in its private share. The identifying assumption is that the rate of improvement in educational outcomes (or the rate of change in sorting measures) that would have been observed without vouchers is not systematically related to characteristics that affected the extent of private entry.

There are, however, three reasons why this may not be the case. First, there could be differences in pre-existing trends that are correlated with the growth of the private sector. For example, if performance had been falling over time in markets where private enrolment grew rapidly after 1982, our estimates could understate the improvement due to choice.

Second, differential concurrent trends also pose potential problems. For example, it could be that the areas where private schools entered more were also ones that subsequently experienced rapid income growth, and that it was this growth, rather than any productivity effects stemming from vouchers, that improved outcomes. In this case, our estimates would overstate the gains from choice.

Third, the existence of heterogeneous treatment effects would also affect both private entry and subsequent achievement growth. For example, it could be that the voucher program resulted in greater entry in communities in which the private productivity advantage was greater. In this case, comparing the change in achievement in communities with more private growth (and a greater private advantage) with communities with less entry (and a smaller private advantage) would overstate the impact of choice in an average community.<sup>23</sup> Put differently, what we would be doing is to estimate the average marginal impact of choice, which would be larger than the average effect.

There are two ways in which we address these concerns. First, we introduce a number of controls for pre-existing and concurrent trends. Second, we look for instrumental variables that affect the extent of private entry, but are ideally uncorrelated with trends in academic outcomes, or with the productivity advantage of the private sector. While the controls and instruments we use are not ideal, by comparing how the estimate changes with these modifications, we can obtain some sense of the magnitude and the direction of bias in our base estimates.

## RESULTS

Based on the framework presented, we now measure the impact of the voucher program. We first briefly describe our data, and then present results on academic outcomes. Finally, we turn to the program's impact on sorting.

### *Data and coverage*

The framework sketched above suggests that the proper way to assess the impact of vouchers is to measure changes in educational outcomes at the aggregate market

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23 This point is formally set out in Hsieh and Urquiola (2003).

level. To implement this, we make use of Chile's (approximately) 300 communes as proxies for educational markets. Communes have a median area of about 55 km<sup>2</sup> and an average population of 39,000. In 1988, the average commune had 27 schools, 18 of which were public, 7 private voucher, and 2 tuition charging. Each commune has an autonomous government that manages schools and other public services.<sup>24</sup>

We use three types of outcome measures. The first consists of the average mathematics and language test score in each commune, which the PER testing program provides for 1982, and the SIMCE for later years.<sup>25</sup> This information is provided at the school level, which we aggregate to create weighted averages for each commune. A potential problem with these data is that several rural communes were not covered in the initial year (1982). However, it still reached 90 per cent of all students, and if the test was administered in a given commune, all the schools in the commune participated.<sup>26</sup>

Our second outcome measure is the average repetition rate, which is defined as the fraction of students who have repeated the same grade at least twice, the official measure of repetition in Chile. We compiled these data from school-level administrative records collected by the Ministry of Education for 1982 and 1988. It covers all schools in the country, so it allows us to check that our results with test scores are not driven by the choice of communes.

Our third outcome variable is the average years of schooling among 10 to 15-year old children. This measure captures several dimensions of the educational system's performance, since it reflects factors like age at entry, repetition, and dropout patterns. We compiled this variable from the population census and CASEN household survey micro-data.

Finally, we use two sources of data to measure students' socioeconomic status. First, the Ministry of Education classifies each school into three to four categories, based on the educational background of the parents. We use this classification, but it is obviously rather coarse. To complement it, our second measure is based on household survey data. The Chilean National Household Survey (CASEN) is unusual in that it identifies the precise school attended by the children surveyed. With this school identifier, we can link its information to administrative records and obtain detailed information on the SES profile of individual schools. The summary statistics for the data are in Table 3.2, and Table 3.7 in the appendix contains further detail on the precise data sources used.

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24 With the exception of 50 communes in the Santiago metropolitan area, virtually all students attend school in the same commune in which they live. Because we want to use these as markets, we aggregate the 50 Santiago communes and consider them as a single school market.

25 PER stands for Programa de Evaluación del Rendimiento Escolar, and SIMCE for Sistema de Evaluación de Calidad de la Educación. These tests have been conducted every year during the period we consider below (with the 4th grade in even and the 8th in odd years) since 1982, with a suspension during 1985-1987.

26 See Espínola (1993).

Table 3.2: Descriptive Statistics at the Commune Level

	1982			1988			1996		
	N	Mean	SD	N	Mean	SD	N	Mean	SD
Outcomes:									
Language score <sup>a</sup>	97	56.0	6.3	293	50.2	6.9	298	68.3	5.8
Maths score <sup>a</sup>	97	50.7	6.4	293	48.3	5.9	298	68.0	5.7
Repetition rate <sup>b</sup>	299	0.12	0.05	304	0.08	0.04			
Years of schooling, 10-15 year olds <sup>c</sup>	170	5.2	0.6	125	6.3	0.4	170	6.2	0.4
Sorting measures: Average among public schools / average among all schools for:									
Language score <sup>a</sup>	101	0.97	0.04	292	0.98	0.05	298	0.98	0.04
Maths score <sup>a</sup>	101	0.97	0.04	292	0.98	0.04	298	0.99	0.04
Repetition rate <sup>b</sup>	299	1.06	0.13	300	1.07	0.17			
Socioeconomic status (SES) index <sup>a</sup>	101	0.96	0.06	292	0.97	0.08	298	0.96	0.07
Household income <sup>d</sup>							185	0.87	0.16
Private enrolment rate <sup>e</sup>	299	0.12	0.14	304	0.17	0.17	304	0.18	0.18

Cont: Table 3.2

*Descriptive Statistics at the Commune Level*

	1982		1988		1996	
	N	Mean	SD	N	Mean	SD
Controls						
<i>Population (hundreds of thousands)</i> <sup>f</sup>	303	0.37	2.1	310	0.43	2.48
<i>Years of schooling, household heads</i> <sup>g</sup>	303	6.2	1.5	177	8.5	1.5
<i>Log of average imputed labour income</i> <sup>g</sup>	303	10.4	0.3	177	12.2	0.3
<i>Poverty rate</i> <sup>h</sup>				164	0.19	0.07
<i>House income</i> <sup>h</sup>				164	0.33	0.13
<i>Literacy rate</i> <sup>h</sup>				303	0.90	0.05

<sup>a</sup> Calculated using test system information, data sources (1), (2), and (4), as described in Table 3.7.

<sup>b</sup> Variable comes from administrative information, data sources (8) and (9). It is not available for subsequent years.

<sup>c</sup> Based on micro census information for 1982 (data source 16), and household survey information for 1990 and 1996 (sources 11 and 13).

<sup>d</sup> Variable based on household survey information, pooled data sources (11) and (12).

<sup>e</sup> Variable comes from administrative information, data sources (8), (9) and (10).

<sup>f</sup> Calculated using census summary information, data sources (17) and (18).

<sup>g</sup> For household heads at least 18 years of age. Calculated using census micro data (source 16) and household survey (data source 13).

<sup>h</sup> Variable based on household survey information, data source (14).



*Measuring the effects of choice on achievement*

We begin by measuring the impact of the voucher program on four measures of academic achievement: 1) language test scores, 2) math test scores, 3) repetition rates, and 4) average years of schooling among 10 to 15-year old children. The key independent variable is the change in the private enrolment rate. These estimates are shown in Table 3.3. We focus on the 1982-1988 period (panel A) since this is the period where we see the largest changes in private enrolment.

Columns 1 and 4 present the basic bivariate OLS regression for language and maths, respectively. Although statistically insignificant, the point estimates suggest that, if anything, test scores experienced a relative decline in communities where the private sector made greater inroads. Columns 7 and 10 turn to repetition rates and years of schooling (among 10 to 15-year old children). Once again, the simplest bivariate OLS estimates provide no evidence of a relative improvement in communes where the private sector grew by more. In fact, column 7 indicates that repetition rates experienced a relative increase in communes where private schooling grew by more. The coefficient is statistically significant and large — a one standard deviation increase in the 1982-88 private enrolment growth increases the observed change in repetition by a quarter of a standard deviation.

As previously discussed, these estimates are robust to the endogeneity of the growth in private enrolment to the extent that it is driven by community characteristics that are fixed over time. However, there could be differential trends in academic outcomes that are correlated with the differential increase in private enrolment. For example, it might be the case that the private sector grew by more in areas where schooling outcomes had been worsening over time. To address this concern, columns 2, 5, 8 and 11 add three controls for pre-existing trends.

First, we include the 1970-1982 change in average years of schooling, which summarizes several aspects of the educational system's performance up to the introduction of vouchers.<sup>27</sup> It is an ideal control for our age-for-grade measure, and also indirectly captures previous performance on repetition. A second control is the 1980-1982 change in private enrolment. While this is not a direct outcome measure, the logic is that as a reaction to declining public performance prior to 1982, households may have started moving to the private sector even before the introduction of vouchers.<sup>28</sup> We would have liked to include data on private enrolment from years prior to 1980, but unfortunately this is not available at the commune level. Using information from maps,<sup>29</sup> however, we were able to include the 1978-1982 change in the proportion of schools private in each commune. When we add these variables, the point estimates are essentially unchanged, and in the case of repetition rates, they continue to be significant at the 5 per cent level.

The differential impact of the voucher program might also be correlated with concurrent trends. For example, if areas with greater private entry also experienced

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27 We compiled this data from the 5 per cent sample of the 1970 and 1982 population censuses.

28 We obtained this information from administrative data provided by the Ministry of Education.

29 Data source 19 in Table 3.7.

greater income growth which independently raised achievement, then our results might overestimate the effect of choice. Columns 3, 6, 9 and 12 add further controls to address this possibility. Specifically, they include 1982-1988 changes in population, labour income and average years of schooling among adults.<sup>30</sup> Again, the point estimates are essentially unchanged, and continue to suggest that greater private growth might have even lowered average achievement.<sup>31</sup>

We have so far focused on the 1982-1988 period, since these were the years in which the voucher program had the greatest effect. However, because it is possible that six years is not enough time for the productivity effects of choice to be observed, panel B (Table 3.3) presents estimates for the impact of the voucher program from 1982 to 1996. Measured by language scores, maths scores and years of schooling (among 10-15 year old children), the impact of the voucher program appears to have been even more negative over this longer time period.<sup>32</sup>

#### *Robustness check: instrumental variables*

An alternative strategy to check for biases is to identify pre-existing commune characteristics that explain the differential impact of vouchers. These can then be used as instruments for the private enrolment growth after 1982, under the assumption that they are uncorrelated with subsequent achievement changes. We use three instruments below. Our first two variables are the urbanisation rate and the population of a commune in 1982. These capture the effect of market size on the extent of private entry. A third instrument is the inter-quartile range in years of schooling observed among adults (also in 1982). We use this as a measure of heterogeneity. The idea is that if parents consider peer group quality when choosing schools, then the demand for private schools that are able to admit *good* peer groups will be larger in less homogeneous communities.

Table 3.1 presents the first stage estimates from OLS regressions of the 1982-1988 change in private enrolment shares on the three candidate instruments. As can be seen, all three are highly correlated with the growth in private enrolment after 1982.<sup>33</sup>

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30 This information is compiled from the 1982 population census and the CASEN; see Table 3.7.

31 As a further check for the test score results, one can also implement regressions 1-9 focusing only on the performance of the tuition-charging private sector, which was not directly affected by the reform. Here again we find no clear effect on achievement, although the estimates are imprecise in part because the sample of municipalities drops substantially. For instance, for column 1 of Table 3.3, the corresponding estimate is 6.4 with a standard deviation of 28.5 and a sample size of 31. The remaining specifications produce similar results, so we omit them for reasons of space.

32 We do not have repetition data for 1996.

33 We also considered population density as a candidate for an instrumental variable. The results are qualitatively similar, so we omit them for reasons of space.

Table 3.3: OLS Regressions for Achievement, 1982-1988 and 1982-1996

	Dependent variable – change in average											
	Language score <sup>a</sup>			Maths score <sup>a</sup>			Repetition rate <sup>b</sup>			Years of schooling <sup>c</sup>		
Panel A – 1982-1988	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<i>Change in priv. enrolment<sup>b</sup></i>	-5.5	-6.7	-3.4	-7.2	-9.4	-9.2	0.10***	0.09**	0.07*	-0.84	-0.72	-0.84
	(7.5)	(7.7)	(8.7)	(7.6)	(7.5)	(8.9)	(0.03)	(0.03)	(0.04)	(0.70)	(0.67)	(0.68)
	[-0.08]	[-0.10]	[-0.05]	[-0.10]	[-0.13]	[-0.12]	[0.24]	[0.21]	[0.17]	[-0.11]	[-0.10]	[-0.11]
<i>Controls: previous trends<sup>d</sup></i>	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
<i>Controls: concurrent trends<sup>e</sup></i>	No	No	Yes	No	No	Yes	No	No	Yes	No	No	Yes
<i>N</i>	84	84	84	84	84	84	145	145	145	85	85	85
<i>R</i> <sub>2</sub>	0.006	0.073	0.105	0.010	0.087	0.156	0.057	0.078	0.095	0.013	0.203	0.239

Notes: \*, \*\*, and \*\*\* indicate significance at the 10 per cent, 5 per cent and 1 per cent level, respectively. Huber – White standard errors are in parentheses. Brackets contain the prop. of a standard deviation change in the dependent variable brought about by a one standard deviation increase in private enrolment.

<sup>a</sup> Calculated using test system information, data sources (1), (2), and (4), as described in Table A1.

<sup>b</sup> Variable comes from administrative information, data sources (8), (9) and (10). Repetition is available only up to 1988.

<sup>c</sup> Based on micro census data for 1982 (data source 16), and household survey data for 1990 and 1996 (source 11 and 13).

<sup>d</sup> Controls for previous trends are: the 1970-1982 change in average years of schooling (from census micro data, source 15 and 16), the 1980-1982 change in private enrolment (source 7 and 8), and the 1978-1982 change in the proportion of schools that are private (source 19 and 18).

<sup>e</sup> Controls for concurrent trends are the 1982-1992 change in population (from data source 17 and 18), and the 1982-1996 change in mean years of schooling and imputed labour income among adults (from census and household survey information, source 13 and 16).

Table 3.3 (continued): OLS Regressions for Achievement, 1982-1988 and 1982-1996

	Dependent variable – change in average											
	Language score <sup>a</sup>			Maths score <sup>a</sup>			Repetition rate <sup>b</sup>			Years of schooling <sup>c</sup>		
Panel B – 1982-1996	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<i>Change in priv. enrolment<sup>b</sup></i>	-13.8*	-12.3	-8.9	-15.8**	-15.0**	-12.8				-2.2***	-2.1***	-2.1***
	(7.9)	(7.7)	(9.9)	(6.5)	(6.7)	(8.0)				(0.4)	(0.4)	(0.4)
	[-0.24]	[-0.21]	[-0.15]	[-0.27]	[-0.25]	[-0.22]				[-0.42]	[-0.40]	[-0.40]
<i>Controls: previous trends<sup>d</sup></i>	No	Yes	Yes	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes
<i>Controls: concurrent trends<sup>e</sup></i>	No	No	Yes	No	No	Yes	Yes	No	No	No	No	Yes
<i>N</i>	84	84	84	84	84	84	84	84	145	145	145	145
<i>R</i> <sup>2</sup>	0.056	0.106	0.145	0.072	0.117	0.171				0.179	0.229	0.250

Notes: \*, \*\*, and \*\*\* indicate significance at the 10 per cent, 5 per cent and 1 per cent level, respectively. Huber – White standard errors are in parenthesis. Brackets contain the prop. Of a standard deviation change in the dependent variable brought about by a one standard deviation increase in private enrolment.

<sup>a</sup> Calculated using test system information, data sources (1), (2), and (4), as described in Table A1.

<sup>b</sup> Variable comes from administrative information, data sources (8), (9) and (10). Repetition is available only up to 1988

<sup>c</sup> Based on micro census data for 1982 (data source 16), and household survey data from 1990 and 1996 (source 11 and 13).

<sup>d</sup> Controls for previous trends are: the 1970-1982 change in average years of schooling (from census micro data, source 15 and 16), the 1980-1982 change in private enrolment (source 7 and 8), and the 1978-1982 change in the proportion of schools that are private (source 19 and 18).

<sup>e</sup> Controls for concurrent trends are the 1982-1992 change in population (from data source 17 and 18), and the 1982-1996 change in mean years of schooling and imputed labor income among adults (from census and household survey information, source 13 and 16).

As with any instruments, the estimates these variables yield have to be interpreted with caution, if only because there is ultimately no way of guaranteeing the instruments' validity. We will present standard over-identification tests, but we cannot rule out the possibility that these instruments are correlated with trends in unobserved determinants of academic outcomes, or that our controls for trends do not capture such determinants. Nonetheless, a comparison of the IV and the OLS estimates can provide us with a further sense of the direction of biases in our base specifications.

With this in mind, Table 3.4 presents the IV results (Table 3.8 in the appendix contains the corresponding reduced form estimates). The instrumental variables are ordered across columns, with the last ones presenting the combination of the three variables.<sup>34</sup> In each case we present two specifications, one without and one with the controls for the pre-existing and concurrent trends introduced above. As the table shows, these estimates continue to suggest that greater private growth resulted in lower achievement. In fact, the IV estimates suggest that, if anything, the OLS estimates overstate the impact of the voucher program. Further, the negative effects for years of schooling also become statistically significant. The only exception arises when we use population as an instrument and the change in average language scores as the outcome of interest. Further, our estimates are not affected when we introduce controls for trends (with the same exception), and all the estimates comfortably pass a standard over-identification test, with the usual caveat about the assumptions behind and power of such tests.

In short, we have looked at three measures of educational achievement so far: repetition rates, years of schooling and test scores. For the first two (particularly repetition), taken at face value, the point estimates and standard errors we estimate (both under OLS and IV) would rule out that choice had net beneficial effects. In the case of test scores, the majority of our point estimates are indicative of a negative effect on outcomes, but a 95 per cent confidence interval around many of them would still include substantial positive effects. Partially in light of this, in the next section we look at a couple of further robustness checks.

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34 The samples vary according to the outcome measure because of the interaction of two factors: i) in the case of test scores, the 1982 PER system did not cover all communes and, ii) in some of the household surveys, there are not enough observations in some communes to estimate a reliable measure of several of the variables we use as proxies for preexisting and concurrent trends. We checked that our results are robust to changes in the sample of communes.

Table 3.4: IV Regressions for Achievement, 1982-1988

Dependent variable 1982-1988 change in average	IV: Urbanisation rate <sup>d</sup>		IV: Population <sup>d</sup>		IV: Inter-quartile range in years of schooling <sup>d</sup>		IV: All three variables	
Panel A-Language score <sup>a</sup>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Change in private enrolment<sup>b</sup></i>	-38.7	-27.2	4.3	11.7**	-19.9	-10.1	-15.8	-4.5
	(30.9)	(35.2)	(5.2)	(5.2)	(18.7)	(20.3)	(14.7)	(14.9)
	[-0.55]	[-0.39]	[0.06]	[0.17]	[-0.28]	[-0.14]	[-0.23]	[-0.06]
<i>Controls for trends<sup>e</sup></i>	No	Yes	No	Yes	No	Yes	No	Yes
N	84	84	84	84	84	84	84	84
<i>Over-identification test, p-value<sup>f</sup></i>	0.99	0.99	0.99	0.99	0.99	0.99	0.97	0.97

Notes: \*, \*\*, and \*\*\* indicate significance at the 10 per cent, 5 per cent, and 1 per cent level, respectively. Huber-White standard errors are in parentheses.

<sup>a, b, and c</sup> as in Table 3.

<sup>d</sup> Variable calculated using census information, data sources (16) and (17), as described in table 3, notes 4 and 5.

<sup>e</sup> Controls for pre-existing and concurrent trends, as described in Table 3.3, notes 4 and 5.

<sup>f</sup> The over-identification test is based on Sargan (1958). We report the p-value for the statistic constructed by multiplying the number of observations and the  $R_2$  from a regression of the residuals from the second stage regression on the instrument(s).

Cont: Table 3.4

*IV Regressions for Achievement, 1982-1988*

Dependent variable- 1982-1988 change in average	IV: Urbanisation rate <sup>d</sup>		IV: Population <sup>d</sup>		IV: Inter-quartile range in years of schooling <sup>d</sup>		IV: All three variables	
Panel B-Mathematics score <sup>a</sup>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Change in private enrolment<sup>b</sup></i>	-99.0** (45.7)	-103.5** (46.7)	-8.0 (6.2)	-1.0 (7.2)	-57.5** (23.7)	-46.4* (25.6)	-49.6** (21.9)	-37.6* (22.4)
<i>Controls for trends<sup>e</sup></i>	No	Yes	No	Yes	No	Yes	No	Yes
N	84	84	84	84	84	84	84	84
<i>Over-identification test, p-value<sup>f</sup></i>	0.99	0.99	0.99	0.99	0.99	0.99	0.92	0.92

Notes: \*, \*\*, and \*\*\* indicate significance at the 10 per cent, 5 per cent, and 1 per cent level, respectively. Huber-White standard errors are in parentheses.

<sup>a, b, c</sup> and <sup>e</sup> as in Table 3.3.

<sup>d</sup> Variable calculated using census information, data sources (16) and (17), as described in table 3.3, notes 4 and 5.

<sup>e</sup> Controls for pre-existing and concurrent trends, as described in Table 3.3, notes 4 and 5.

<sup>f</sup> The over-identification test is based on Sargan (1958). We report the p-value for the statistic constructed by multiplying the number of observations and the R<sub>2</sub> from a regression of the residuals from the second stage regression on the instrument(s).

Cont: Table 3.4

*IV Regressions for Achievement, 1982-1988*

Dependent variable- 1982-1988 change in average	IV: Urbanisation rate <sup>d</sup>		IV: Population <sup>d</sup>		IV: Inter-quartile range in years of schooling <sup>d</sup>		IV: All three variables	
Panel C-Repetition rate <sup>b</sup>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Change in private enrolment<sup>b</sup></i>	0.33*** (0.08)	0.37*** (0.11)	0.17*** (0.04)	0.15*** (0.04)	0.28*** (0.08)	0.28*** (0.10)	0.29*** (0.07)	0.28*** (0.08)
<i>Controls for trends<sup>e</sup></i>	No	Yes	No	Yes	No	Yes	No	Yes
N	145	145	145	145	145	145	145	145
<i>Over-identification test, p-value<sup>f</sup></i>	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99

Notes: \*, \*\*, and \*\*\* indicate significance at the 10 per cent, 5 per cent, and 1 per cent level, respectively. Huber-White standard errors are in parenthesis.

<sup>a, b, c</sup> as in Table 3.3.

<sup>d</sup> Variable calculated using census information, data sources (16) and (17), as described in table 3.3, notes 4 and 5.

<sup>e</sup> Controls for pre-existing and concurrent trends, as described in Table 3.3, notes 4 and 5.

<sup>f</sup> The over-identification test is based on Sargan (1958). We report the p-value for the statistic constructed by multiplying the number of observations and the R<sub>2</sub> from a regression of the residuals from the second stage regression on the instrument(s).



Cont: Table 3.4

*IV Regressions for Achievement, 1982-1988*

Dependent variable- 1982-1988 change in average	IV: Urbanisation rate <sup>d</sup>		IV: Population <sup>d</sup>		IV: Inter-quartile range in years of schooling <sup>d</sup>		IV: All three variables	
Panel D-Years of schooling <sup>c</sup>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Change in private enrolment<sup>b</sup></i>	-4.0***	-5.1***	-2.0***	-2.5***	-2.9*	-2.7**	-3.2***	-3.5***
	(1.4)	(1.6)	(0.7)	(0.8)	(1.6)	(1.2)	(1.1)	(1.1)
	[-0.54]	[-0.69]	[-0.27]	[-0.34]	[-0.39]	[-0.36]	[-0.43]	[-0.47]
<i>Controls for trends<sup>e</sup></i>	No	Yes	No	Yes	No	Yes	No	Yes
N	85	85	85	85	85	85	85	85
<i>Over-identification test, p-value<sup>f</sup></i>	0.99	0.99	0.99	0.99	0.99	0.99	0.98	0.90

Notes: \*, \*\*, and \*\*\* indicate significance at the 10 per cent, 5 per cent, and 1 per cent level, respectively. Huber-White standard errors are in parentheses.

<sup>a, b, and c</sup> as in Table 3.3.

<sup>d</sup> Variable calculated using census information, data sources (16) and (17), as described in table 3.3, notes 4 and 5.

<sup>e</sup> Controls for pre-existing and concurrent trends, as described in Table 3.3, notes 4 and 5.

<sup>f</sup> The over-identification test is based on Sargan (1958). We report the p-value for the statistic constructed by multiplying the number of observations and the R<sub>2</sub> from a regression of the residuals from the second stage regression on the instrument(s).

*Robustness check: international and sectoral comparisons*

An alternative manner to determine whether school choice improved schooling quality in Chile is to measure the country's performance in international tests in math and science, widely known as TIMSS. This is possible because Chile participated in TIMSS in 1999, and in its precursor, the IEA, in 1970. While international comparisons should always be interpreted with caution, in this case they have the advantage of not relying on the differential impact of vouchers across different markets within Chile. We summarise the results in Figure 3.4. Panel A shows that during the last three decades, the score of the median Chilean student did not change relative to that of the median student in the other 12 countries that participated in both years.<sup>35</sup> This is all the more surprising since Chile's economy has performed quite well over the last two decades.<sup>36</sup> In fact, when one introduces controls for per capita income growth, and changes in enrolment rates and school spending, the performance of the median Chilean student appears to have slightly worsened over the last 30 years (panel B).<sup>37</sup>

A final way to measure whether average school quality has improved is to use the average test scores from the PER and SIMCE. Clearly, it would not make much sense to compare the change in average test scores, since we have no way of knowing that the tests are comparable over time. However, since the tuition-charging private schools were plausibly unaffected by the voucher program, we can use these schools as a control and measure the gap between the test scores of the elite private schools and those of publicly funded (voucher and public) institutions. This evidence, presented in Figure 3.5, similarly provides no indication that vouchers improved outcomes in the schools they affected. Here the data show a well-known feature of the Chilean education system, namely the large gap in test scores between the subsidised (voucher and municipal) sector and the tuition-charging private schools. In 1982 the average score of the publicly funded schools is about 1.3 standard deviations below the elite private schools. By 1996, this gap had actually become larger.<sup>38</sup>

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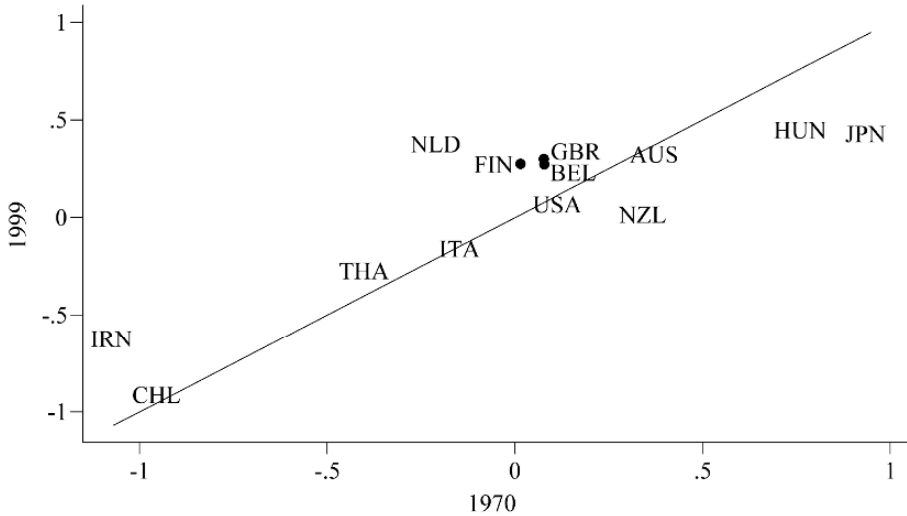
35 The unit is the standard deviation of U.S. students taking TIMSS in 1970 and 1999.

36 From 1970 to 1999, per capita GDP grew at an annual rate of 4.3 per cent in Chile and at average annual rate of 2.8 per cent in the other 12 countries (authors' calculations using the International Financial Statistics).

37 The cross-sectional data tells a similar story. For example, the math score of the median Chilean student on the 1999 TIMSS was 1.08 standard deviations below that of the average student in the other 38 countries, while the science score was 0.7 standard deviations lower (again, the unit is the standard deviation of the U.S. in 1999). After controlling for GDP per worker, school spending (per student relative to per capita GDP), and enrolment rates, the residual score of the median Chilean student was 0.78 standard deviations below that of 38 other countries in math and 0.33 standard deviations lower in science. We took the figures on GDP per worker from the Penn World Tables and those on school spending and enrolment rates from UNESCO's yearbook.

38 In part, as we discuss in the next section, this in itself may be capturing some sorting, since the tuition-charging private sector did grow significantly (although from a small base) during this period, presumably cream skimming some students from voucher and even municipal schools.

A. Median Test Scores (standard deviation from 13-country average).



B. Residual Median Test Scores (standard deviation from 13-country average)

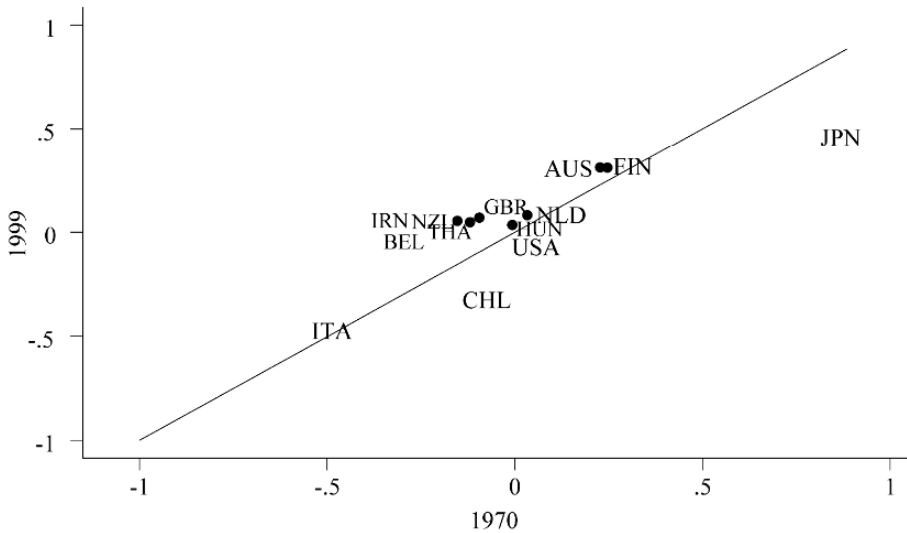


Figure 3.4: Chile's Performance in International Tests, 1970 and 1999

Note: The scores for each country subtract the mean score for the 13 countries and are divided by the standard deviation of U.S. scores in the given year. Residual test scores are residuals from regression of median test score on GDP/worker, enrolment rate and ratio of spending per student to GDP per capita.

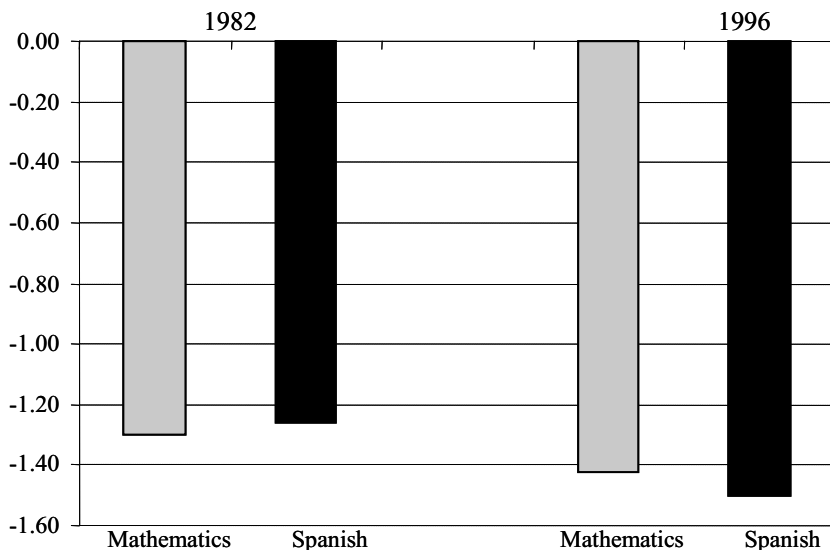


Figure 3.5: Average Test Score Among Municipal and Voucher Schools, Relative to Tuition-Charging Private Schools, 1982 and 1996 (measured as standard deviations below tuition-charging private schools)

### Sorting

We now turn to the effect of the voucher program on sorting. We begin by describing the relation between a commune's private enrolment rate, on the one hand, and the ratio between the average *quality* of its public school students and the commune-wide average, on the other. Note that the latter variable is a within-commune observation — it does not compare public school students in one commune with those in a different market. The idea is that if private schools skim cream, then this measure should fall with private enrolment.

Panel A in Table 3.5 first looks at the cross-sectional evidence. The dependent variable in columns 1 and 2 is the ratio of the educational background of public school students to the average in the community (for 1996). This data is based on an index of the educational background of each school, provided by the Ministry of Education. This measure is crude, but the estimates are nonetheless precisely estimated, and suggest that the relative educational attainment of parents in public schools is lower in communes with higher private enrolment.<sup>39</sup> Using more detailed

39 For each variable featured in Panel A, we present results using the most recent cross-section in our data. However, we obtain very similar estimates using the cross-sections from other years. For instance, for the 1988 and 1990 cross sections, the point estimates in columns 1 and 2 are 0.15 and 0.15, and 0.16 and 0.14, respectively. In every case these are significant

household survey data on parental income for 1990/1992, columns 3 and 4 suggest a similar conclusion. The point estimates are again precisely estimated and quite large: they suggest that a one standard deviation increase in the private enrolment rate is associated with 38-43 per cent of a standard deviation decline in the relative income of public school parents.

Building on this evidence, columns 5-10 turn to indirect measures of sorting, namely the ratios of the average performance (on test scores and repetition) of public school students and the average in the entire commune. These are indirect measures, because they are a function of three effects: sorting, the productivity advantage of private schools, and the public productivity response. First, if private schools take the best students from the public sector, the sorting effect suggests that the relative test scores (or relative repetition rates) of public schools should be lower (higher) in communes with greater private sector penetration.

Second, if private schools are better than public schools, then even in the absence of sorting, the mere reallocation of students to the private sector will raise average test scores, and thus lower the relative position of the public sector. Third, as for the public response, there are effects going in opposite directions. On the one hand, if public schools improve by more in communes with more competition from the private sector, then the relative grades of public schools should be higher in communes with greater private enrolment. On the other hand there is the possibility of endogenous entry: if the private sector grew by more in communes where public schools were under-performing (prior to the voucher program), then this would suggest that the relative grades of public schools should be lower in communes with a larger private enrolment rate.<sup>40</sup>

In the event, the estimates in columns 5-10 uniformly indicate that when measured by math scores language scores, and repetition rates, public schools do worse in communes with a higher private enrolment rate. All the estimates are precisely estimated, are robust to the introduction of controls for community characteristics, and suggest that the private enrolment rate has a first order effect on the relative performance of public schools. For example, a simple bivariate OLS regression suggests that a one-standard deviation increase in the private enrolment rate lowers the relative maths score of public schools by about 40 per cent of a standard deviation.

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at the 5 per cent or 1 per cent level (these results are available upon request). Similar robust findings emerge for the maths and language results we discuss below. For income, 1990/1992 is the only cross-section for which we matched household survey and school level data.

40 These points are set out more formally in Hsieh and Urquiola (2003).

Table 3.5: *Sorting Among Communes, 1990s Cross-section and 1982-1988 Changes*

Panel A-1990s cross sections <sup>d</sup>	Dependent variable – within-commune observations of average characteristics in public schools/average characteristics in all schools														
	SES index <sup>a</sup>	Income <sup>b</sup>	Language <sup>a</sup>	Mathematics <sup>a</sup>	Repetition <sup>c</sup>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Private enrolment <sup>c</sup>	-0.20***	-0.16***	-0.37***	-0.33***	0.08***	-0.08***	-0.09***	-0.09***	-0.09***	-0.09***	-0.09***	-0.09***	-0.09***	0.42***	0.28***
	(0.02)	(0.03)	(0.07)	(0.09)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)	(0.07)	(0.07)
	[-0.58]	[-0.46]	[-0.43]	[-0.38]	[-0.39]	[-0.39]	[-0.39]	[-0.39]	[-0.39]	[-0.39]	[-0.39]	[-0.42]	[-0.42]	[0.44]	[0.29]
<i>Commune controls<sup>e</sup></i>	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	No	Yes	No	Yes
<i>Thirteen regional dummies</i>	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	No	Yes	No	Yes
<i>N</i>	296	296	184	184	296	296	296	296	184	296	296	296	296	299	299
<i>R<sub>2</sub></i>	0.313	0.493	0.171	0.285	0.188	0.396	0.215	0.346	0.193	0.447	0.193	0.346	0.193	0.447	0.447

Notes: \*, \*\*, and \*\*\* indicate significance at the 10 per cent, 5%, and 1% level, respectively. Huber-White standard errors are in parentheses.

<sup>a</sup> Calculated using test system information, data sources (1) and (2), as described in table A1.

<sup>b</sup> Based on household survey information, pooled from data sources (11) and (12).

<sup>c</sup> Based on administrative information, data sources (8), (9) and (10). Repetition data is available only up to 1988.

<sup>d</sup> In the cross-section, the data for test scores and the SES index are for 1996, for income they are for 1990/1992 (pooled data) and for repetition they are for 1988. For each variable, these are the latest cross-sections available in our data.

<sup>e</sup> Cross-section controls include: literacy rate, mean years of schooling, poverty rate, average household income (all from household survey information, data source 14) population and population squared (from census summary information, data source 18).

<sup>f</sup> Controls for concurrent trends are the 1982-1992 change in population (from data source 17 and 18), and the 1982-1996 change in mean years of schooling and imputed labour income among adults (census and household survey information, sources 13 and 16).



Again, we want to emphasise that the relative performance of public schools is only an indirect measure of sorting. As we discussed, there are two reasons why the relative performance of public schools would be lower in communes with a higher private enrolment rate. First, it might be the case that the public sector improves in response to the competition induced by private entry. Second, it could also be that private schools are better and the reallocation of students towards this sector raises average test scores. As we discussed, when choice also results in sorting, the proper way to measure whether these two productivity effects are present is to look at aggregate measures of achievement, and the evidence we presented in the previous section suggests that these productivity effects are not there.

Nonetheless, we cannot rule out that these results may be influenced by the endogenous entry of private schools in communes where public schools are weakest. One way to deal with this is to again difference out fixed commune characteristics by looking at changes over time. We do this in panel B with regressions of the 1982-1988 change in the relative *quality* of public schools (again measured by language and maths scores, and by the repetition rate) and the change in the private enrolment rate. These estimates indicate that the composition effect of choice seems to dominate any effect of competition on the public schools' productivity. Although not as precisely estimated as the cross-sectional estimates, they are generally statistically significant and indicate that the relative *quality* of public schools has worsened in communes where private enrolment grew by more.<sup>41</sup>

For completeness, we again use the urbanisation rate, population and the inter-quartile range in years of schooling (of working age adults) as instruments for the differential impact of the voucher program. Table 3.6 presents these results (the reduced form estimates are in Table 3.9). These estimates provide further evidence that the main effect of school choice in Chile has been to facilitate greater sorting. In fact, the IV estimates generally indicate that choice led to more sorting than that suggested by the OLS estimates.

In sum, there are two points we take away from this evidence. First, private schools attracted students from families with higher levels of income and schooling. Second, because these characteristics are important determinants of educational outcomes, it will be virtually impossible to isolate whether public schools improved in response to the competitive forces unleashed by the private sector. As our estimates show, the relative grades of public school students fell by more in communes with a larger increase in private enrolment. This does not necessarily imply that public schools did not improve — it simply indicates that if a productivity effect is present, it is overwhelmed by the sorting effect.

We note that our findings are consistent with the only two studies that we are aware of that measure the consequences of comprehensive school choice on sorting. Although they do not have the data to assess the effect on educational productivity, Fiske and Ladd's (2000) analysis of the open-enrolment program among public

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41 We do not have data on sorting over time based on income measures, since the 1982 population census does not identify whether a child is enrolled in a public or a private school (this information is only contained in the CASEN household survey, which is available starting in 1987). We also do not use the SES index, since the way in which it is calculated has changed over the years.



schools in New Zealand suggests that a major effect of choice has been to induce greater segregation. A second study, by Berry Cullen *et al.* (2005), on Chicago's open-enrolment program at the high school level, also suggests that the main effect has been to induce segregation, without any evidence of increased academic outcomes (except for career academies).

Finally, we have focused on sorting between the public and the private voucher schools, but the sorting that took place is clearly more complicated. For example, as previously discussed, the new private voucher schools generally attracted students from lower SES backgrounds than those in incumbent institutions. This suggests that it was largely the entrants, and not the incumbents, that were attracting students from the public schools. To take another example, the gradual growth of the private tuition-charging school in the 1990s could also reflect *cream skimming*, albeit from the private voucher schools. Consistent with this, there is evidence that the gap in the socioeconomic background of students in the private elite schools and the publicly funded schools narrowed from 1987 to 1998.<sup>42</sup> This is consistent with a story in which the SES of students who switch to the elite private schools is higher than the average SES in the publicly-funded sector, but lower than that in the elite schools, and thus lowers the average SES in both sectors.

#### WHEN SCHOOLS COMPETE, HOW DO THEY COMPETE?

In sum, the central effect of the school voucher program in Chile appears to have been to facilitate the exodus of the Chilean middle class from public schools, without much evidence that it has improved aggregate academic outcomes. While it is not surprising that choice could result in sorting, what accounts for the surprising lack of improvement on achievement?

One possibility, often raised by Chilean observers, is that public schools may in fact not have experienced significant incentives to compete. We presented evidence consistent with this view in Figure 3.3, which suggested that few public schools have been forced to close. In addition, Chilean authorities might not have provided enough information for parents to determine a school's quality. It was only after 1995 that the authorities made test scores widely available, and newspapers began publishing school rankings based on these.

Nonetheless, even if the public schools were not forced to compete and thus did not improve, as long as private schools are more productive than public schools, we should still see better aggregate performance given the large number of students who transferred to the private sector, and we simply find no evidence of this. What can account for the lack of a private productivity advantage?

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42 We use the national household survey (CASEN) to measure student characteristics in the private elite schools and in the publicly-funded sector (voucher and municipal schools). This indicates that the average years of schooling of parents in the private elite schools was 4.49 years (S.E.: 0.08) higher than in the publicly-funded schools in 1987, but this gap had fallen to 2.65 years (S.E.: 0.06) by 1998. When measured by income, the gap between private elite school parents and publicly funded school parents also narrowed, from 0.969 log points (S.E.: 0.018) in 1987 to 0.655 log points (S.E.: 0.015) by 1998.

Table 3.6: IV Regressions for Sorting, 1982-1988

Dependent variable: change in average characteristics in public schools/ average characteristics in all schools Panel A-Language score <sup>b</sup>	IV: Urbanisation rate <sup>a</sup>		IV: Population <sup>a</sup>		IV: Inter-quartile range in years of schooling <sup>a</sup>		IV: All three variables	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Change in private enrolment<sup>c</sup></i>	-1.04**	1.54*	-0.16***	-0.16***	-0.58**	-0.78*	-0.50**	-0.57*
	(0.51)	(0.91)	(0.06)	(0.06)	(0.29)	(0.40)	(0.23)	(0.30)
	[-1.21]	[-1.79]	[-0.19]	[-0.19]	[-0.67]	[-0.91]	[-0.58]	[-0.66]
<i>Control: concurrent trends<sup>d</sup></i>	No	Yes	No	Yes	No	Yes	No	Yes
<i>N</i>	84	84	84	84	84	84	84	84
<i>Over-identification test, p-value<sup>e</sup></i>	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99

Notes: \*, \*\*, and \*\*\* indicate significance at the 10 per cent, 5 per cent, and 1 per cent level, respectively. Huber-White standard errors are in parentheses.

<sup>a</sup> Based on census summary and micro information, data sources (16) and (17), as described in Table A.1.

<sup>b</sup> Calculated using test source information, data sources (1) and (2).

<sup>c</sup> Variable based on administrative information, data sources (8) and (9).

<sup>d</sup> Controls for concurrent trends are the 1982-1992 change in population (from data sources 17 and 18), and the 1982-1996 change in mean years of schooling and imputed labour income among adults (from census and household survey information, sources 13 and 16).

<sup>e</sup> The over-identification test is based on Sargan (1958). We report the p-value for the statistic constructed by multiplying the number of observations and the R<sub>2</sub> from a regression of the residuals from the second stage regression on the instrument(s).

Cont: Table 3.6

*IV Regressions for Sorting, 1982-1988*

Dependent variable: change in average characteristics in public schools/ average characteristics in all schools Panel B-Maths score <sup>b</sup>	IV: Urbanisation rate <sup>a</sup>		IV: Population <sup>a</sup>		IV: Inter-quartile range in years of schooling <sup>a</sup>		IV: All three variables	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Change in private enrolment<sup>c</sup></i>	-0.69**	-1.01*	-0.07	-0.08*	-0.61**	-0.73*	-0.42**	-0.45*
	(0.31)	(0.59)	(0.06)	(0.05)	(0.24)	(0.38)	(0.18)	(0.26)
	[-0.83]	[-1.22]	[-0.09]	[-0.10]	[-0.74]	[-0.88]	[-0.51]	[-0.55]
<i>Controls: Concurrent trend<sup>d</sup></i>	No	Yes	No	Yes	No	Yes	No	No
<i>N</i>	84	84	84	84	84	84	84	84
<i>Over-identification test, p-value<sup>e</sup></i>	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99

Notes: \*, \*\*, and \*\*\* indicate significance at the 10 per cent, 5 per cent, and 1 per cent level, respectively. Huber-White standard errors are in parenthesis.

<sup>a</sup> Based on census summary and micro information, data sources (16) and (17), as described in Table A1.

<sup>b</sup> Calculated using test source information, data sources (1) and (2).

<sup>c</sup> Variable based on administrative information, data sources (8) and (9).

<sup>d</sup> Controls for concurrent trends are the 1982-1992 change in population (from data sources 17 and 18), and the 1982-1996 change in mean years of schooling and imputed labour income among adults (from census and household survey information, sources 13 and 16)

<sup>e</sup> The over-identification test is based on Sargan (1958). We report the p-value for the statistic constructed by multiplying the number of observations and the R<sub>2</sub> from a regression of the residuals from the second stage regression on the instrument(s).

Cont: Table 3.6

## IV Regressions for sorting, 1982-1988

Dependent variable: change in average characteristics in public schools/ average characteristics in all schools Panel C-Repitition rate <sup>c</sup>	IV: Urbanisation rate <sup>a</sup>		IV: Population <sup>a</sup>		IV: Inter-quartile range in years of schooling <sup>a</sup>		IV: All three variables	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Change in private enrolment<sup>c</sup></i>	1.62***	1.71**	0.50***	0.47***	0.63	0.54	1.03***	0.88**
	(0.46)	(0.66)	(0.14)	(0.15)	(0.39)	(0.44)	(0.33)	(0.34)
	[0.75]	[0.79]	[0.23]	[0.22]	[0.24]	[0.25]	[-0.39]	[-0.33]
<i>Controls: concurrent trends<sup>d</sup></i>	No	Yes	No	Yes	No	Yes	No	No
<i>N</i>	163	163	163	163	163	163	163	163
<i>Over-identification test, p-value<sup>e</sup></i>	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99

Notes: \*, \*\*, and \*\*\* indicate significance at the 10 per cent, 5 per cent, and 1 per cent level, respectively. Huber-White standard errors are in parentheses.

<sup>a</sup> Based on census summary and micro information, data sources (16) and (17), as described in Table A1.

<sup>b</sup> Calculated using test source information, data sources (1) and (2).

<sup>c</sup> Variable based on administrative information, data sources (8) and (9).

<sup>d</sup> Controls for concurrent trends are the 1982-1992 change in population (from data sources 17 and 18), and the 1982-1996 change in mean years of schooling and imputed labour income among adults (from census and household survey information, sources 13 and 16)

<sup>e</sup> The over-identification test is based on Sargan (1958). We report the p-value for the statistic constructed by multiplying the number of observations and the  $R_2$  from a regression of the residuals from the second stage regression on the instrument(s).

One possibility is that private schools responded to the competitive pressures unleashed by the voucher program, not by raising their productivity, but rather by choosing better students. School administrators in Chile, as in the rest of the world, can raise their schools' outcomes by doing things such as identifying and hiring effective teachers, and then supporting and monitoring their work; but they also realise that this is costly and may not always work. In contrast, it is easier to improve outcomes simply by picking the best students. Parents can also be willing participants in this, and their demand for good peer groups obviously reinforces the desire of school administrators to cream skim.<sup>43</sup>

In fact, there is abundant institutional evidence that in Chile, private schools do compete by attempting to select better students. As previously mentioned, private schools are allowed to reject students, and Gauri (1998) presents evidence that the majority of them do exercise this ability, screening children either by requiring a parental interview, or by using admissions tests. Chilean observers have also pointed out that new voucher schools have sought to attract students by endowing themselves with *symbols* previously associated only with elite, tuition-charging institutions, such as uniforms, and the use of foreign and particularly English names.<sup>44</sup>

## CONCLUSION

This paper makes two contributions to the school choice debate. First, we make the point that if choice leads to greater segregation, one will not be able to isolate the extent to which public schools improve their productivity in response to the competitive threat induced by choice, from the effect of sorting on the public sector's performance. On the one hand, if choice results in cream-skimming (as we suggest happened in Chile), the average performance of public schools might fall even if they become more effective, simply because they have lost their best students. On the other hand, if low SES students leave the public sector, as Bettinger (1999) suggests happened in Michigan with charter school entry, then the average performance of public schools might improve even if they do not raise their productivity. We argue that the best one can do is to measure changes in outcomes at the aggregate level.

Second, we focus on a country that implemented an unrestricted nationwide school choice program. We show that the first order consequence of the voucher program in Chile was middle-class flight into private schools, and that this shift does not seem to have resulted in achievement gains, certainly not of the magnitude claimed by some choice advocates. Again, we cannot rule out the possibility that our estimates are biased by unobserved trends in schooling outcomes, but we show that our results do not change when we introduce a number of controls for such trends.

We want to make three points clear. First, we are not claiming that vouchers have not produced any gains at all. It might be the case, for instance, that after twenty years of choice, Chilean schools are spending their money in ways that

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43 For suggestive evidence of this in the U.S., see Rothstein (2004).

44 See Espínola (1993)

parents value more. For instance, they may now be emphasising freshly painted walls more than reduced teaching loads. Additionally, many families surely value the availability of subsidised religious instruction. In short, school choice might improve welfare even if it does not improve academic achievement.

Second, it should be clear that the underlying institutions and the precise details of the program implemented are critically important in thinking about the potential impacts of school choice. For instance, a choice program in a decentralised schooling system, such as that in the U.S., is likely to result in a different type of sorting. Additionally, choice programs that do not allow private schools to select their students, or those that provide incentives to schools that attract low SES children, might result in less sorting than we find. Finally, it is possible that a choice program in a school system where private schools are less important than was the case in Chile in the early 1980s may see a smaller response from the private sector.

Third, we interpret the Chilean evidence as providing strong support for the notion that schools do respond to incentives. The key question is, incentives for what? It seems that if schools are provided with incentives to improve their absolute outcomes, and are also allowed to choose their student body, they are likely to respond by attempting to select better students. This should not be surprising to those familiar with elite universities, since an integral part of the perceived quality of these institutions is their ability to skim the very best students. While there are enormous rewards for the institutions that succeed in this endeavor, from a societal perspective it may be a zero-sum game, since one school's selectivity gain is another's loss. Therefore, an important topic for further research is the design of mechanisms that would preserve the competitive effects of vouchers, but force schools to improve by raising their value added, and not by engaging in rent-seeking behaviour.<sup>45</sup>

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<sup>45</sup> See for instance Epple and Romano (2002).

Table 3.7: Data Sources

Data type and source	Original unit of observation	Year from 1970 - 1999									
		'70	'78	'80	'82	'88	'90	'92	'96	'98	'99
Test scores											
<i>PER</i> <sup>a</sup>	School				(1)						
<i>SIMCE</i> <sup>b</sup>	School					(2)	(3)		(4)		
<i>TIMSS</i> <sup>c</sup>	Country										(5)
<i>International science exams</i> <sup>d</sup>	Country	(6)									
Administrative information											
<i>Enrolment files</i>	School			(7)	(8)	(9)			(10)		
Household surveys											
<i>CASEN</i> <sup>e</sup>	Individual						(11)	(12)	(13)	(14)	
Census											
<i>Microdata</i>	Individual	(15)			(16)						
<i>Summary files</i>	Commune				(17)			(18)			
Other											
<i>School maps</i> <sup>f</sup>	Commune		(19)								

## Notes:

<sup>a</sup> Programa de Evaluación del Rendimiento Escolar<sup>b</sup> Sistema de Evaluación de Calidad de la Educación<sup>c</sup> Third International Mathematics and Science Study, see <http://timss.bc.edu>.<sup>d</sup> International Science Exams, International Education Association, see Comber and Keeves (1973)<sup>e</sup> Encuesta de Caracterización Socioeconómica Nacional<sup>f</sup> See Instituto Geográfico Militar (1983)

Table 3.8: Reduced Form Regressions for Achievement, 1982-1988

Dependent variable: 1982-88 change in	Independent variable: 1982 observation of					
	Urbanisation rate <sup>a</sup>		Population <sup>a</sup>		Inter-quartile range in years of schooling <sup>a</sup>	
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Private enrolment</i> <sup>b</sup>	0.09*** (0.03) [0.32]	0.08*** (0.03) [0.28]	0.44*** (0.07) [0.31]	0.42*** (0.07) [0.30]	0.19*** (0.04) [0.38]	0.19*** (0.05) [0.38]
<i>Controls for trends</i> <sup>c</sup>	No	Yes	No	Yes	No	Yes
<i>N</i>	84	84	84	84	84	84
<i>R</i> <sub>2</sub>	0.101	0.222	0.091	0.238	0.150	0.281
<i>Average language score</i> <sup>d</sup>	-3.5 (2.4) [-0.18]	-2.2 (2.8) [-0.11]	1.9 (2.2) [0.02]	5.0** (2.2) [0.05]	-3.8 (3.5) [-0.11]	-1.9 (3.8) [-0.06]
<i>Controls for trends</i> <sup>c</sup>	No	Yes	No	Yes	No	Yes
<i>N</i>	84	84	84	84	84	84
<i>R</i> <sub>2</sub>	0.031	0.113	0.000	0.105	0.012	0.106
<i>Average Maths Score</i> <sup>d</sup>	-9.0*** (2.2) [-0.43]	-8.2*** (2.4) [-0.39]	-3.5 (3.0) [-0.03]	-0.4 (3.1) [-0.00]	- (3.6) [-0.30]	-8.8** (4.0) [-0.24]
<i>Controls for trends</i> <sup>c</sup>	No	Yes	No	Yes	No	Yes
<i>N</i>	84	84	84	84	84	84
<i>R</i> <sub>2</sub>	0.182	0.277	0.001	0.144	0.091	0.194
<i>Average repetition rate</i> <sup>b</sup>	0.04*** (0.01) [0.34]	0.04*** (0.01) [0.34]	0.09** (0.04) [0.09]	0.08** (0.04) [0.08]	0.06*** (0.02) [0.26]	0.06*** (0.02) [0.26]
<i>Controls for trends</i> <sup>c</sup>	No	Yes	No	Yes	No	Yes
<i>N</i>	145	145	145	145	145	145
<i>R</i> <sub>2</sub>	0.119	0.151	0.009	0.078	0.085	0.122
<i>Mean year of schooling</i> <sup>e</sup>	-0.5*** (0.2) [-0.26]	-0.7*** (0.2) [-0.37]	-1.0** (0.5) [-0.09]	-1.2** (0.5) [-0.11]	-0.8** (0.3) [-0.22]	-0.7** (0.3) [-0.19]
<i>Controls for trends</i> <sup>c</sup>	No	Yes	No	Yes	No	Yes
<i>N</i>	85	85	85	85	85	85
<i>R</i> <sub>2</sub>	0.077	0.326	0.007	0.239	0.043	0.261

Note: \*, \*\*, and \*\*\* indicate significance at the 10 per cent, 5 per cent, and 1 per cent level, respectively. Huber-White standard errors are in parentheses. Brackets contain the proportion of a standard deviation change in the dependent variable brought about by a one standard deviation increase in the private enrolment rate.

<sup>a</sup> Based on census summary and micro information, data source (16) and (17), as described in Table 3.7.

<sup>b</sup> Calculated using administrative information, data sources (8) and (9).

<sup>c</sup> Controls for pre-existing and concurrent trends, as described in Table 3.3, notes 4 and 5.

<sup>d</sup> Based on test score information, data sources (1) and (2).

<sup>e</sup> Calculated using census and household survey information, data sources (16) and (11).



Table 3.9: Reduced Form Regressions for Sorting, 1982-1988

Dependent variable: 1982-88 change in	Independent variable:				Inter-quartile range in years of schooling	
	Urbanisation rate <sup>a</sup>		Population <sup>a</sup>		<sup>a</sup>	
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Private enrolment</i> <sup>b</sup>	0.08** (0.03) [0.31]	0.06** (0.03) [0.23]	0.44*** (0.05) [0.33]	0.41*** (0.05) [0.31]	0.16*** (0.04) [0.36]	0.15*** (0.04) [0.34]
<i>Controls: concurrent trends</i> <sup>c</sup>	No	Yes	No	Yes	No	Yes
<i>N</i>	84	84	84	84	84	84
<i>R</i> <sub>2</sub>	0.104	0.183	0.110	0.228	0.138	0.220
<i>Sorting measure for language</i> <sup>d,e</sup>	-0.09*** (0.03) [-0.40]	-0.10*** (0.03) [-0.45]	-0.07** (0.03) [-0.06]	-0.06** (0.03) [-0.05]	-0.09** (0.04) [-0.24]	-0.11** (0.05) [-0.29]
<i>Controls: concurrent trends</i> <sup>c</sup>	No	Yes	No	Yes	No	Yes
<i>N</i>	84	84	84	84	84	84
<i>R</i> <sub>2</sub>	0.151	0.171	0.004	0.011	0.062	0.080
<i>Sorting measure for maths</i> <sup>d,e</sup>	-0.06*** (0.02) [-0.28]	-0.06** (0.03) [-0.28]	-0.03 (0.02) [-0.02]	-0.03 (0.02) [-0.03]	-0.10*** (0.04) [-0.28]	-0.11** (0.05) [-0.30]
<i>Controls: concurrent trends</i> <sup>c</sup>	No	Yes	No	Yes	No	Yes
<i>N</i>	84	84	84	84	84	84
<i>R</i> <sub>2</sub>	0.073	0.128	0.001	0.052	0.076	0.120
<i>Sorting measure for repetition rate</i> <sup>b,d</sup>	0.17*** (0.04) [0.31]	0.14*** (0.05) [0.26]	0.28** (0.11) [0.03]	0.07 (0.10) [0.02]	0.25** (0.08) [0.11]	0.09 (0.07) [0.09]
<i>Controls</i>	No	Yes	No	Yes	No	Yes
<i>N</i>	163	163	163	163	163	163
<i>R</i> <sub>2</sub>	0.100	0.130	0.003	0.076	0.014	0.080

Note: \*, \*\*, and \*\*\* indicate significance at the 10 per cent, 5 per cent, and 1 per cent level, respectively. Huber-White standard errors are in parentheses. Brackets contain the proportion of a standard deviation change in the dependent variable brought about by a one standard deviation increase in the private enrolment rate.

<sup>a</sup> Based on census summary and micro information, data sources (16) and (17), as described in Table 3.7.

<sup>b</sup> Based on administrative information, data sources (8) and (9).

<sup>c</sup> Controls for concurrent trends are the 1982-1992 change in population (data sources 17 and 18), and the 1982-1996 change in mean years of schooling among adults, and imputed labour income (from census and household survey information, sources 13 and 16).

Cont: Notes, Table 3.9

<sup>d</sup> The sorting measure is: average characteristic in public schools/average characteristic in all schools.

<sup>e</sup> Based on test score information, data sources (1) and (2).

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The Challenge for Education Research,  
Policy and Practice*Ruth Lupton and Martin Thrupp*

## THE CHALLENGE FOR EDUCATION RESEARCH, POLICY AND PRACTICE

Although it is a truism that schools differ, some ways in which they do so are more prominent in academic and policy debate than others. In particular there is usually much more discussion of variation in features of schools' internal organisation and practice (e.g. aspects of leadership, management or pedagogy) than of the diverse local social and political contexts which could partly account for them. The latter include differences in pupil intake characteristics (class, ethnicity and turnover, proportion of pupils from refugee families or with special needs) and other school and area characteristics (urban/rural location, LEA policies, market position compared to surrounding schools). We are using 'local' broadly here to mean non-national: the social and political features of regions, areas, neighbourhoods and school catchments could all be relevant to our argument.

In spite of this imbalance, the imperative to take schools' highly distinctive local contexts seriously has long been a social justice theme in education. For instance it was manifested in *Savage Inequalities* (Kozol 1991) which documented the vast disparities in resources between inner-city and suburban schools in the USA. This concern with resources has continued but arguments around context have also developed a new twist related to the key policy 'drivers' of our time (e.g., Kozol, 2005). Hence when Nick Davies wrote about rich and poor UK schools (Davies 2000), it was to illustrate how their vastly different local contexts impacted on their ability to respond to current 'policy technologies' (Ball 2003) — the market, managerialism and performativity.

The impact of school contexts has also been the subject of two detailed studies undertaken by the authors of this chapter. Thrupp's (1999) research explored the impact of the socioeconomic status (SES) composition of school intakes on school processes in four New Zealand secondary schools. It illustrated how higher SES schools had less pressured guidance and discipline systems, with higher levels of student compliance and fewer very difficult guidance or discipline cases. Their senior management teams had fewer student, staff, marketing, and fund-raising problems, and more time to devote to planning and to monitoring performance.

Day-to-day routines were more efficient and more easily accomplished. When it came to classroom instruction, the students in the higher SES schools were generally more compliant and more able to cope with difficult work. They used more demanding texts and other teaching resources and their teachers were more qualified and more motivated. Higher SES schools were also able to support more academic school programmes and a wider range of extracurricular activities. Thrupp (1999) concluded that SES composition impacts on school processes in numerous ways which would cumulatively boost the academic performance of schools in middle-class settings and drag it down in low socioeconomic settings. Lupton (2004, 2005) has extended Thrupp's analysis by illustrating that even amongst ostensibly similar SES schools there are other contextual differences which may cumulatively make a considerable difference to school processes and student achievement. Her study of four high poverty schools in England demonstrates the nuances of local context. It considers pupil characteristics (e.g., ethnicity, refugee status, foster children and special educational needs), area characteristics (e.g., urban/rural, labour market structure and history, housing market) and school characteristics (e.g. market position compared to surrounding schools, LEA admissions policies, school type and history). The analysis shows how one low SES school cannot be assumed to face the same contextual challenges as another. For example, one poor inner urban school with a rapidly growing, predominantly Pakistani population and operating within a weakly differentiated and collaborative school market reported few behavioural challenges, high levels of parental support and pupil aspiration, and little need to divert management time into marketing activities or management of falling rolls. Another school, in a declined seaside town with a selective and highly differentiated school system, reported low pupil esteem and aspirations, difficulties in securing parental support, high levels of pupil turnover arising from temporary housing and a large children's home population, as well as extreme difficulties in teacher recruitment and retention because the school was regarded as being the 'bottom of the pile' in the local area. Arguing that 'organisational impacts on schools in different kinds of disadvantaged areas can be significantly different' (Lupton 2004: 22), the study raises questions about the adequacy of socioeconomic indicators used to describe school context, and about the suggestion that differences in student achievement between schools in similarly poor settings can be wholly ascribed to internal school characteristics.

These two studies, which are qualitative examples of what we call 'school composition research', provide a significant challenge to the central premise of conventional school effectiveness and improvement research: that for the most part it is the internal organisation of schools rather than their social and political contexts which 'makes the difference'. Instead, school composition research suggests that many factors identified by school effectiveness and improvement research as contributing to student achievement will be hard to replicate because while they may be *school-based*, they may nevertheless not be *school-caused*. This argument builds on previous quantitative and qualitative studies (Anyon 1981; Brown *et al.*, 1996; Gerwitz 1998; Ho and Willms 1996; Lauder *et al.*, 1999; Metz 1990; Pong 1998; Robertson and Symons 1996; Thomson 2002) and the research base in this area is presently being extended through the HARPS project, a large Economic and Social

Research Council (ESRC) funded study of Hampshire primary schools where the authors and colleagues are studying schools across the socioeconomic spectrum and also looking at numerous other elements of context.

In this chapter we draw on the above studies and other work to present an interrelated set of arguments for taking school contexts more seriously. We begin by reviewing a range of social justice rationales for taking school contexts into better account, and highlighting the challenges contextualisation currently poses for practice and for policy. We note important constraints on contextualised practice and limited developments in contextualising policy. In relation to both of these, we argue the need for research to consider local context much more, in order to provide a stronger underpinning for contextualised policy and practice. In the latter part of the paper, therefore, we discuss how educational research has, and could, deal with issues of context. We look at school effectiveness research, school improvement research, and research which is directly concerned with the impact of school intakes on school processes and student achievement, which we call school composition research. We note that school effectiveness and school improvement research is now increasingly concerned to take context seriously. School composition research is potentially especially insightful because it is addressing the issue most directly. Nevertheless future large-scale studies in this area need to overcome a number of limitations within the existing literature.

### WHY CONTEXTUALISE?

There are multiple social justice arguments for taking school contexts more seriously. Perhaps the most important is to develop less 'neutral' discourses on schooling that give greater recognition to the importance of social injustices in reproducing educational inequalities. From this position, a more serious recognition of local context could give rise to fairer evaluation of school performance, a fairer distribution of resources, and the provision of more appropriate advice and support to schools in less favourable contexts. All of these, we argue, would enable better responses to the needs of marginalised school populations.

#### *Thinking less neutrally about school performance*

It is remarkable, although politically and practically understandable, that by 2006 so much educational literature continues to take a generic perspective on schools, discussing them as if they were much the same and downplaying their distinctiveness. The problem is especially acute in the various problem-solving literatures on school change, management, effectiveness and improvement (see Thrupp and Willmott 2003). As Slee and Weiner (1998) have commented about school effectiveness research, such literatures 'bleach context from their analytic frame'. They chime with the 'one size fits all' assumptions of New Public Management (NPM) theory, that social change can be engineered through organisational change and through more efficient, market-oriented public service delivery which is informed by best practice, driven by incentives and targets, and closely scrutinised and monitored. What is sought is the right prescription for

'delivering' education, with 'underperformance' in terms of pupil outcomes being accounted for by deviance from good organisational management and practice.

Wherever discussion of local context raises social complexity and inequality, NPM assumptions are revealed as simplistic. Everyone acknowledges that effective management and teaching in one local context is not the same as effective management and teaching in another. However by failing to highlight the differences and inequalities between them, generic discussions create accounts which are too 'neutral' and politically 'naïve' and fail to allow for contextualised policy responses that might better meet need. They are hence complicit in the perpetuation of unequal schooling and unequal outcomes. By treating all schools as being the same and thus capable of achieving the same, they render unimportant, perhaps even invisible, the social and economic inequalities that really prevent some students from doing as well as others.

The discourses and ensuing policies and practices of Ofsted<sup>46</sup>, the English school inspectorate, illustrate this problem. Ofsted inspects schools according to a standard framework. Its judgements are publicly available and intended to influence school choice. They may also trigger externally-imposed school improvement measures or, eventually, the closure of a school. That its judgements are a fair reflection of school quality is thus critical. We argue that Ofsted should take account of local context in making its judgements, not only on grounds of fairness to staff and pupils and transparency to parents, but because failing to do so perpetuates the perception among the public and educational policymakers that effective schools can surmount the problems posed by economic and social inequalities and produce more equitable outcomes. However, for Ofsted, the guardian of school quality, taking local context seriously has been seen as making excuses for schools that could do better.

Under the former head of Ofsted, Chris Woodhead, social and economic inequalities went deliberately unrecognised. Woodhead refused to adopt a better contextual indicator on the grounds that 'it is essential that Ofsted does nothing to encourage the use of pupils' backgrounds as an excuse for poor performance' (Woodhead letter to the TES, March 1, 1996). Ofsted's perspective has changed under its current head David Bell, whose annual reports and speeches show considerable recognition of contextual constraints on schools in their attempts to raise student achievement. For instance in 2003 Bell argued that, 'There remain some groups of pupils and some schools for whom raising standards remains an almost intractable challenge' (Ofsted 2003a). In a speech to the Fabian Society, Bell (2003) went on to note:

- that since 1996, the socioeconomic attainment gap has narrowed in primary schools but widened somewhat in secondary schools;
- that low SES schools are marked by disconnection, recruitment problems and high turnover of pupils and that 'Where factors like these are present, and compound one another, schools are fragile places';
- the need for 'caution against unrealistic expectations about how quickly deep change can be effected', there being 'no new magic recipe' for dealing with low-attaining schools. 'The brutal fact of the matter is that the

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46 The Office for Standards in Education.

difficulties that some schools face have been around for many years and successive governments, national and local, have not conclusively dealt with them'; and

- 'that there is absolutely no place for demonising those schools and those adults and children who work in them. This is not about a 'blame culture', castigating insensitively those who are tackling formidable challenges with resolution and commitment'.

Putting some of this thinking into its methodology, Ofsted's instruction to lead inspectors since 2003 has been to shape inspection to reflect the main features of schools (Ofsted 2003b). There has been an increased emphasis on local context in the PANDA (School Performance and Assessment Report), a pre-inspection document giving background information about the school and its performance.<sup>47</sup> Inspectors are now advised not to use the PANDA data inflexibly but rather to 'consider the PANDA report in the light of schools' circumstances, drawing on other available information as appropriate' (Ofsted 2004: 2). Similarly there has been new recognition in the inspection framework that the indicator used to measure school-level deprivation, the number of pupils eligible for a Free School Meal (FSM) may, though readily available, not be a fair reflection of social context. Inspectors should use their discretion (Ofsted 2003c). The new framework also puts new emphasis on 'the effect of any particular aids or barriers to raising achievement, either within the school or externally' (Ofsted 2003c: 127).

Such directions, we argue, should lead to fairer evaluations of the practice of schools coping with the most challenging circumstances, and open the way for the recognition that, if it is not all the school's fault that disadvantaged students do not do well, other measures beyond school practice will be necessary to equalise attainment. However, the exemplary schools discourse, the idea that all schools could replicate the example of the best, is remarkably persistent. For instance, in response to research by the second author which illustrated that most schools in special measures were in deprived areas and questioned whether Ofsted inspections took account of the depressing effect of poverty on the effectiveness of school processes (see Lupton 2004), an Ofsted spokesperson said:

'Deprivation must not be an excuse for unsatisfactory provision. Subsequent reports on schools that have been through special measures show just what can be done even in the most difficult circumstances'. ('Does Ofsted ignore effects of poverty?' (2002))

Similarly, despite its concern with context, Bell's Fabian Society speech notes 'no room for an excuse culture' which he describes as 'a patronising or indulgent approach which condones low expectations or overstates the intractability of the external pressures'. 'Exemplary schools' are still vital to Ofsted's thinking:

[There are] higher-attaining disadvantaged urban schools which are 'better led' and managed and more effective explanation of the success of these schools is well documented by Ofsted and others. Essentially what makes the difference, as

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47 This has also been helped by the availability of Pupil Level Annual School Census (PLASC) data, which holds attainment and background data for every pupil, throughout their school career, and newly available data from the 2001 Census of Population.



our publication 'Improving City Schools' said a couple of years ago, is 'the clarity, intensity and persistence of the schools' work and the rigour with which it is scrutinised. At best, all the energy of the school serves the same end, raising standards' (Bell 2003).

In the light of this, it is unsurprising that steps towards more contextualised policy responses from the New Labour government have been relatively limited. The government was elected first in 1997, then again in 2001 and 2005. Its first term policies did direct more money towards schools in poor neighbourhoods, first through Education Action Zones and then through Excellence in Cities (EiC), which provided additional resources for learning mentors, learning support centres and out-of-school hours activities. In some EiC areas, schools also received Pupil Learning Credits (PLC) to provide extra resources and learning opportunities for pupils from low-income homes. Both EiC and PLC were positively evaluated (Kendall *et al.*, 2005; McNally 2005). However, in this period, the government's approach to school improvement remained explicitly de-contextualised, for instance in strategies like 'naming and shaming' schools with the lowest attainment, 'floor targets' of student achievement to be reached by every school regardless of situation, and the 'Fresh Start Initiative', which led to rapid closure and replacement of so-called failing schools in disadvantaged areas. Second and third term policies have continued to redistribute funding and have begun to demonstrate an increasing recognition of local context in school improvement policy as well. Notable initiatives include 'Schools Facing Challenging Circumstances' (SFCC), a programme of research and support for disadvantaged schools, and the 'London Challenge', providing tailor-made support strategies for schools in some of the capital city's most disadvantaged areas.

However, even these initiatives, while more supportive in nature, are still founded on the belief that quality differences between schools are primarily the responsibility of schools themselves, and can therefore be tackled by initiatives at the school level. For instance in launching 'Schools in Challenging Circumstances', the government set out an analysis of the problem that was still dominated by references to the poor practice of heads and teachers (DfES 2001) and the need for 'access to good practice and advice' (DfES 2001: 50) and support to schools to 'turn themselves around' (DfES 2001: 51). While appearing to recognise the additional challenges for staff in disadvantaged areas, it persisted with a managerialist agenda and managerialist solutions such as better management, better training and better monitoring (Lupton 2005). One of us (Lupton 2004) has argued elsewhere that, framed by this discourse, the government's policies towards schools in disadvantaged areas represent 'inching forward' rather than a substantial shift towards a more contextualised and more effective school improvement policy.

### *Fairer distribution of resources*

What would a more contextualised school improvement policy look like? At its heart would be a fairer distribution of resources to allow for the different organisational designs required in different school contexts. Schools in disadvantaged areas are more generously funded than schools elsewhere, not just

through additional grants, which have a history stretching back to the Educational Priority Areas of the late 1960s, but through mainstream funding. Nevertheless, resources in the low SES schools researched by the authors were clearly insufficient to meet some of the additional needs that they faced (Thrupp 1999; Lupton 2004). Attempts by teachers and managers to respond to their local context often led to trade-offs between equally valuable activities. For example, dealing with welfare issues or behaviour may detract from preparing lessons or planning new initiatives. It is clear that disadvantaged contexts generate additional time demands, both for mainstream teaching staff and in particular for senior staff.

In Lupton's 'Middle Row High School', for example, one deputy head estimated that she spent between half a day and one day per week on attendance issues, including managing the home/school liaison worker, administering the rewards system, and liaising with the LEA's education welfare officer over extreme cases. Logic would suggest that at the very least, this level of senior management commitment must mean that other tasks have to be carried out after school hours, creating additional pressure on staff. There was a particular issue in providing effective education for the minority of pupils who found it difficult to cope with school and had extreme behavioural problems and/or non-attendance. Lupton (2004) found that because of their legal obligations, and because they were simply not equipped to provide the intensive and flexible support these pupils needed, schools' efforts were directed into getting these pupils to come to school, attend lessons and learn the national curriculum. However, many teachers felt that school, the nature of the curriculum, and the environment of academic pressure was part of the problem, and that alternatives might work better: smaller groups or individual tuition in less formal settings, and curricular options that valued other skills and qualities. Existing funding regimes, combined with performative pressures, left little room for creative curriculum or pedagogies. In sum, our qualitative work suggests the need for funding for smaller teaching groups, more teachers in the classroom, more non-contact time for front-line staff, a higher ratio of managers to staff, and substantially more investment in learning support, language teaching, pupil welfare and parental liaison roles.

Progress towards a fairer distribution of resources has been made since Lupton's study. A new school funding formula agreed in 2003 increased the level of funding to schools in disadvantaged areas, and new resources made available in 2006 for greater personalisation of learning have also been allocated partly on the basis of deprivation. However, there is still room for considerable improvement in resources. The 2003 settlement, by the government's own admission, only covered half of the unmet need identified by the consultants who researched the development of the funding formula (DfES 2003) and a recent review by the Department for Education and Skills and the Treasury found that varying systems for the distribution of funds to schools by local education authorities led to wide variations in funding between schools with similar levels of deprivation. The review found that additional expenditure had a positive impact on attainment, but that deprivation funding was not accurately and consistently targeted towards schools in deprived areas and that its impact was not being maximised (DfES and HMT 2005). Thus there is still work

to be done to ensure that the extra resources needed are consistently provided as part of the core funding of schools.

A key issue, of course, is that funding needs will differ according to different local contexts. The sophistication of neighbourhood level socioeconomic indicators is increasing rapidly, and there would be much to be gained from the development of a more nuanced set of indicators for school context, possibly combining pupil level and area factors. The better and more differentiated funding that would result would reflect the fact that the unpredictability of the school day in some schools is, in a sense, entirely predictable given their contexts.

*More appropriate advice and support to schools in less favourable contexts*

Contextualised models of practice are also needed. It is clear that deliberate adaptations are made by teachers and school leaders in order to deal with the social, political and market contexts of their schools. In the first author's study of high and low SES schools there were dramatic differences in pedagogical and management approaches in order to respond to the very different intakes of the schools (Thrupp 1999). Yet even in the second author's study of the more subtle differences between high poverty schools' adaptations extended to almost every aspect of organisation: lesson lengths, class sizes, ability groupings, additional learning support, behaviour and attendance management, pastoral care, extra-curricular activities and so on (Lupton 2004).

Does this mean that there can be no models of practice to follow because examined in detail, each school's context, and thus its practice, must be wholly individual? We think not. Most plausibly, common practices are probably adopted in schools with certain clusters of common contextual characteristics, giving a middle ground between wholly generic versions of 'good practice' and wholly individualised ones. However, since school improvement research and policy has been so generic in its approach, these contextualised examples are not to the fore. It is hard to work out which practices would be most appropriate in schools of different composition. Research into the effectiveness of strategies for the design and use of learning support units or the deployment of external agencies, for example, are in their infancy. Even more 'mainstream' and contested issues of practice call for more sophisticated research taking account of different contexts.

An example would be pupil grouping. Since research shows that mixed ability groups tend to benefit lower attaining pupils both socially and educationally (Hallam 2002), one could argue that mixed ability teaching is the right grouping strategy for a school with a large number of low-attaining pupils. On the other hand, since pupils themselves report that the benefit of streamlining is that the most disruptive pupils are all removed into bottom classes, leaving others to learn (Ireson and Hallam 2001), one could equally argue that (on educational attainment grounds) streaming is a better strategy for a school with the same poverty levels as the first school but which attracts some pupils with above average prior attainment, but also has a small minority of pupils with extremely disturbed behaviour. Of course there are other arguments one might make on social justice grounds about the merits or otherwise of pupil grouping or differentiated curriculum. The examples are used here simply to

illustrate that if research provides insufficiently differentiated information about good practice in different contexts, it may be difficult for school teachers and leaders to make the right decisions to enhance effectiveness in specific areas of school practice. A better understanding of local context would allow those providing policy and advice to schools to design interventions which have a better chance of fitting and therefore succeeding within the school environments they are intended for and therefore improving students' life chances.

### *Better recognition for marginalised school populations*

In arguing for a contextualised approach on social justice grounds, we are well aware that contextualisation, misused, can be antithetical to social justice. There is a fine line between highlighting the constraints imposed by poverty, social class, immigrant or refugee status, learning difficulties, residential transience or the experience of being in care so that schools can be equipped and teachers trained to deal with them better, and allowing them to become the excuse for low expectations and inequitable provision based on race, class or gender stereotypes. Low expectations and unchallenging work were evident in all the schools we studied (Thrupp 1999; Lupton 2005). Their damning consequences within the environment of high stakes testing and the 'A-C economy', have been powerfully noted elsewhere (Gillborn and Youdell 2000). For teachers dealing with students whose home circumstances and background present barriers to their educational progress, the tension between wanting to take account of these circumstances, and wanting to ignore them, is very real. They are reflected for instance in one inner-London teacher's concerns, conveyed during Lupton's research study, about having to be 'hard' and 'cruel':

When I first started teaching 10 years ago I think I would have thought 'oh no the poor little children.' It doesn't matter what your home background is. You can't use that as an excuse to not access your education. You say it to them and it sounds really hard, you know, 'I'm sorry that your mum made you go to the post office to get her money so you couldn't come to school, but unless somebody gets organised, you are not going to have access to your timetable and you're not going to be doing any work and what are you going to end up with at the end of Year 11? It sounds so cruel but what I've learned teaching in these kinds of areas is that it's not an excuse and you don't say 'poor little child'. You say 'yes, it's tough, it's hard, I want to support you and the best way to support you is that you leave here with 5 A-C passes so you can do what you want.'

However, generic discussions that neutralise the characteristics of the students are also unhelpful. Effectively, these discussions adopt a default position that schools are populated by students who are of average prior attainment, speakers and readers of English, keen or at least compliant with the goals of their schools, ready to learn and emotionally, socially, financially and physically equipped to do so perhaps also white and middle class. From this position, if the students do not progress, we can assume a failure of school practice. However, failing to recognise the 'messy detail' of the reality of school populations, in order to concentrate on

school practice, effectively screens out the needs of students who are from working-class, minority or indigenous group backgrounds or who have particular learning needs of one sort or another. It makes it less likely that school funding or organisation or pedagogic practice will be geared towards their needs, and more likely that they will be treated as deficient, failing, and not worthy of support in a system geared to the needs of 'typical' or 'normal' students. Providing there is vigilance against taking up a deficit perspective, the dangers of treating schools neutrally are greater than the dangers of drawing attention to pupil differences.

### CONTEXTUALISING RESEARCH

To better underpin arguments for contextualised policy and practice, there is a continuing challenge for research to take better account of school contexts. Here we discuss this challenge in relation to school effectiveness research, school improvement research and school composition research. There is increasing concern to recognise and understand context in school effectiveness and school improvement research but also much room for further development. Meanwhile school composition research has always been directly concerned with the effects of school context but if it is to generate more useful insights, future large scale studies in this area need to overcome a number of limitations within the existing literature.

#### *School Effectiveness Research (SER)*

Caught up in insisting that 'schools can make a difference', SER (and not just its large-scale studies) has long been insufficiently searching about schools' local contexts (Lauder *et al.*, 1998; Thrupp 1999, 2001). School and teacher effects have tended to be regarded as independent of the social characteristics of students and schools and independent of the nature of the curriculum and policy. These have all been treated as givens. The individual family backgrounds of students (e.g., social class and ethnicity) have been usually regarded as factors which are 'containable' through value-added analysis and should not be examined in any case because they lie outside the control of schools. As Angus (1993: 341) noted, 'Family background, social class, are typically regarded as 'noise', as outside background factors which must be controlled and then stripped away so that the researcher can concentrate on the important domain of school factors'. Similarly, SER literature has tended to regard variation in school composition as none of its business. For instance Scheerens (1992: 93) argued that "High numbers of disadvantaged pupils and ethnic minorities push down the performance of the entire pupil population (of a school)" but added, "Because the central concern here is with the 'construction' of effective schools no further attention is given to these contextual characteristics".

There are two difficulties with this approach. First, neither individual family background nor school composition can really be treated as independent of school processes and therefore 'controlled for' so that the real differences between schools can be isolated. As our qualitative work has shown, these factors continually impact on the day-to-day processes of schools, and pupils' experiences of learning. Treating

these factors as ‘noise’ and bleaching them out actually impedes learning about which processes are effective for which pupils and in which circumstances.

Second, neither background factors nor school composition are ‘given’ in the sense of being fixed attributes. They are created and mediated, to a large extent, by public policy decisions. Family background, such as whether a child lives with one or both parents, can be influenced by housing, health, employment and taxation policies at the national level, and its impact made worse or better by policy interventions (Anyon 1997). It will also be influenced by neighbourhood-level characteristics, resources and investment (Thomson 2002), which will therefore affect levels of student achievement. It is the failure to question this underlying social inequality and the nature of policy that impacts on it which inevitably leads school effectiveness researchers to overemphasise school solutions. This occurs not in the body of their analyses where they are often quite honest about the small size of school effects versus background effects but in the sheer weight of discussion given over to the effects of schools rather than broader social structures. Similarly, SER’s disregard for school composition fails to question the longstanding provision of schooling via a social hierarchy of schools or the problem that education policy can and does in fact impact on levels of segregation, for instance, through the introduction of quasi-market policies (Lauder *et al.*, 1999). A key point here is that local variation exists and matters. An individual eligible for a free school meal is not necessarily subject to the same pressures in one neighbourhood as in another, and schools with certain levels of FSM eligibility do not all face identical challenges. More sophisticated contextual indicators are needed.

At best, SER has tended to use prior attainment as a proxy for school social context, an approach that, although perhaps driven by data difficulties, reflects a certain disregard for detail and lack of concern with explanatory theory. Low prior attainment is no doubt well correlated with disadvantage, but its use as the only contextual indicator prevents us from understanding which aspects of a disadvantaged local context make a difference, and from understanding the extent to which low attainment *per se* makes a difference to school effectiveness and to student outcomes, and the extent to which specific contextual factors make an additional contribution.

Unwillingness to delve into variations in local context means that variations in school practice come to be seen to the most powerful explanations for differential performance. An example is provided by a Welsh case study of a ‘more effective’ low SES school called Trelent where the students achieved higher mean scores in comprehension, maths, computation and applied maths than at Hillcrest, a less effective high SES school (Reynolds *et al.*, 2002). Stringfield, a U.S. school effectiveness researcher, has drawn on this study to support the argument that schooling can overcome the effects of social inequality:

In the British component of the International School Effectiveness Research Programme (Reynolds *et al.*, in press), students at a very high poverty school repeatedly out-achieved students in middle-class British schools in the same district. Similarly well-documented examples of high poverty schools producing achievements that are tested and retested and found to be above the national average abound from Weber (1971) to today. Whole schools of children in high

poverty situations have repeatedly demonstrated the ability to achieve at levels above those of their more affluent peers (Stringfield 2002: 19).

Nevertheless this claim is unconvincing because in Reynolds and colleagues' study the nature of the pupil intake is not clear and there is insufficient concern with the likely longitudinal effects of context. First, the pupils 'come from a mainly ethnic Asian background or are from low SES white families' (Reynolds *et al.*, 2002: 230). The 'mainly ethnic Asian background' of the students raises the distinct possibility that these are immigrant families from middle-class backgrounds in their countries of origin, even if they are not well-off in UK terms. Second, we are told that the annual Free School Meals (FSM) entitlement for Trelent School is consistently at or above the 30 per cent level. This is not really a 'very high poverty' school as argued by Stringfield; certainly there are schools with much higher FSM levels as well as the problem discussed shortly, of how much FSM really measures SES anyway. A better test of what is possible would be if the students at Trelent were nearly all from clearly working-class backgrounds over several generations as was the case for Ford Junction, a 'less effective' low SES school in the study which had pupils from 'an almost universally white low SES background, mainly from the surrounding state-built housing estates' and with FSM consistently above 50 per cent (Reynolds *et al.*, 2002). Third, these are primary schools and the value-added was only measured at the end of year 1 at age six or seven. Because context can be expected to have a cumulative impact throughout school careers, it is a very much different thing to argue for powerful school effects at age seven compared to secondary schools, by which time students have had many years experiencing more or less favourable school contexts.

A further problem with SER is that it has had little to say about the way some schools would have difficulty interpreting and 'delivering' national curricula or other policies because of their local contexts. As SER proponents Reynolds and Teddlie (2000) explained, the curriculum has been neglected in SER because of "the orientation of researchers towards a behavioural, technicist approach in which the vessel of the school is studied rather than the contents", "a conservative political orientation in which schooling was seen as a 'good' which SER was to encourage more children to take up", a reaction against researchers who wanted to discuss "what ought to be the goals of education" and because of the "immense difficulties involved in measuring the variable" (Reynolds and Teddlie 2000: 341). There is admirable frankness about the limitations of SER here but Angus (1993) drew further implications:

Knowledge and curriculum are generally regarded as unproblematic [in SER] and it is assumed that students must simply learn them. Effective students, regardless of class, race, gender or culture, merely adjust to and accommodate what is presented to them. Since measures of school effectiveness typically amount to measures of basic skills but may also include generally good and polite behaviour (defined as social outcomes), it seems likely that cultural discrimination is built in. This means that not only is there a lack of engagement with sociological (or other) theory, but also effectiveness work is largely trapped in a logic of commonsense which allows it, by and large, to be appropriated into the Right's hegemonic project. (Angus 1993: 343)

Although SER has often tried to counter the contextual criticisms made of it (Reynolds and Teddlie 2001; Stringfield 2002; Teddlie and Reynolds 2001), some recent SER work is beginning to recognise them. A review by Luyten and colleagues (2005) while sympathetic to SER, also recognises the concerns of its critics and argues for change, for instance:

In addition to explaining the relationship between features of school processes and school performance, studies should place more emphasis on the influence of non-educational factors in the school context (e.g., neighbourhood, family, peer group) on schooling processes and on student achievement. More insight is needed into why and how the school context interacts with school performance and with processes at both the classroom and the school level. (Luyten *et al.*, 2005: 59)

and:

In our opinion, SER should also pay much closer attention to factors outside the educational system that influence learning (such as the family and peer group). Even though almost every SER study confirms the limited influence of school factors and the substantial impact of family background on learning, the latter relation is hardly ever investigated thoroughly. In practice such insight could facilitate the exploration of a great number of complex issues, including how to determine the extent to which the demands that are placed on schools are realistic. (Luyten *et al.*, 2005: 269-270)

Here and in other areas they discuss, Luyten and colleagues seem to be genuinely trying to move the SER literature on. Their arguments may not entirely satisfy SER's contextual critics (who might argue for instance that, by and large, SER has ignored the effects of school context) but nevertheless they seem to signal the potential for a significant shift in the SER literature.

### *School Improvement Research (SIR)*

School improvement is another area undertaking contextual self-examination in recent years. Noting that some researchers have argued that it is more difficult for schools serving disadvantaged areas to make progress on many of the traditional indicators, Gray (2001: 19) concluded that 'more evidence on this issue is needed'. This has been an important agenda when in the past improvement literature has tended to favour generalised rather than context-specific discussion. This has seldom been made explicit – it is more the case that the school improvement literature has been vague about what sort of students, classrooms or schools are actually under discussion. The reader is therefore encouraged to take the view that school problems and solutions are essentially the same regardless of their social setting. Another problem is the use of notions of school culture which neglect the culture of students and the community, for instance the idea of schools 'moving' 'cruising,' 'strolling', 'struggling' and 'sinking' (Stoll and Fink 1998). What has not been discussed is the way these various models of school culture relate to middle-class schools and working-class schools, white schools and minority/indigenous schools and so on.

The most widely published UK SIR to take up the challenge of greater contextualisation has been that of Alma Harris and colleagues (Harris and Chapman 2002;



Harris 2002; Harris *et al.*, 2003; Harris and Chapman 2004; Harris *et al.*, 2005). This research has responded to the government's concern with SFCC noted earlier. At first this research appeared not to represent a significant advance. For instance it stressed the importance of a number of general findings not far removed from the kinds of 'factors' approach traditionally used in school effectiveness studies: vision and values, distributed leadership, investing in staff development, relationships, and community building (Harris 2002). The same study also suffered from the problem that the specific contexts of the 10 schools involved were not adequately identified. They were all DfES categorised as SFCC but it is important to note that schools can be thus identified either on socioeconomic grounds (35 per cent or more of students receiving free school meals) or on performance grounds (school achieving 25 per cent or less 5 A\* - C GCSEs). Furthermore the selection was intended 'to ensure the schools represented a wide range of contexts and were geographically spread.'

Nevertheless Harris and colleagues' more recent work in this area has been stressing the significance of context specificity much more. For instance Harris and Chapman (2004: 429) argue that

As the long term patterning of educational inequality looks set to remain, to rely on standard or standardised approaches to school improvement that combine accountability, pressure and blame to force improved performance would seem unwise. In schools in difficult contexts, this is more likely to exacerbate the problem rather than solve it. Instead the evidence would suggest that more locally owned and developed improvement strategies are needed that appreciate school context, best match prevailing conditions and build the internal capacity for development within the school. If the goal of raising performance in schools in difficulty is to be achieved, school improvement approaches that neglect to address the inherent diversity and variability across and within schools in the same broad category will be destined to fail.

Harris and Chapman note other recent calls for context specificity and it does seem to be featuring on the SIR agenda now. Yet Harris and Chapman's own approach in their 2004 article does not actually further this agenda. Rather, they provide a typology of different kinds of schools in difficulty along continuums from individualised to collaborative teacher culture and from internal to external accountability. Schools with collaborative cultures and internal accountability are seen to have high capacity for improvement, those with individualised teaching cultures and strong external accountability measures are seen to be immobile. In other words, Harris and Chapman (2004) are more concerned with the internal culture and organisation of schools in a conventional SIR sense than with exploring the extent to which schools can reasonably build internal 'capacity' in the face of particular kinds and combinations of wider contextual factors.

Two lessons might be drawn from this. The first is that like SER, contextualisation in terms of external factors remains largely an aspiration for SIR. It is not yet clear how and to what extent it will become a reality. The second is that the notion of context and contextualised research could be taken to mean different things to different constituencies and like many other educational terms be subject to

having their depth and critical intent stripped out in less than searching analyses. Given this problem we now turn to consider school composition research itself.

### *School Composition Research (SCR)*

Detailed qualitative work, such as that of the authors mentioned earlier, explores the impact of context on school processes. While the findings of such research are plausible, they are likely to be more influential if supported by evidence from large-scale quantitative studies of compositional (school intake) and neighbourhood effects. These studies address the issue of school context directly and have the greatest potential for influence at a policy level. However quantitative studies to date offer a conflicting picture, with some indicating strong effects and others not (Thrupp, Lauder and Robinson 2002), and with some offering competing explanations for compositional effects apart from school effects (Nash 2003)<sup>48</sup>. This has recently led Gorard (2006) to argue that compositional effects are so much at the limits of our detectability, likely to be small relative to the amount of 'noise' in the system, and require such sophisticated statistical modelling, as to be possibly not worth exploring. However the problem with Gorard's argument is that while he starts by making some well-founded points, it quickly degenerates into a quite untenable attack on statistics; in particular, Gorard blames statistics rather than the failure of social sciences in producing testable theories of importance.

We believe the way forward is not to abandon the search for compositional effects but to carry out better statistical research. A review of quantitative research in this area undertaken by the first author and colleagues has illustrated important conceptual and methodological inadequacies in the way school compositional effects have been previously modelled (Thrupp, Laude and Robinson 2002). Although there is no space to rehearse the issues here, this review strongly suggests that better studies of compositional effects could provide more conclusive findings. In particular school composition research needs to:

- be multi-disciplinary in nature and incorporate qualitative study of school process as well as large-scale quantitative analysis, thus enabling it to capture school organisation and curriculum effects and to shed light on the direction of causal relationships;
- incorporate multiple measures of school composition;
- enable analysis of group, class, and school-level composition;
- take a longitudinal approach;
- incorporate broader contextual variables such as neighbourhood characteristics and school market position, and;
- include and analyse different types of school and different models of composition, for example, schools with larger numbers of moderately poor

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48 Nash (2003) poses the existence of within-SES group school selection effects as a competing explanation for compositional effects. This is an interesting hypothesis but not one which precludes compositional effects: it is presumably possible that both kinds of effects are present to a greater or lesser degree.

pupils compared with schools with smaller numbers of moderately poor pupils (based on Thrupp *et al.*, 2002).

The authors' most recent research in this area, the HARPS project<sup>49</sup>, is attempting to follow this agenda as far as possible with children passing through Years 3 and 4 (ages 7 and 8) in Hampshire primary schools. Quantitative analysis is underway using pupil and school-level composition data for the children at all 306 full primary and junior schools in Hampshire (n=11793). This analysis uses standard measures of composition (FSM and attainment) but data also include age, gender, ethnicity, special educational and neighbourhood characteristics, and permit identification and analysis of pupils who move schools. A second element of the project moves beyond the limitations of existing social class indicators by analysing data on student backgrounds (parental education, employment, ethnicity and class-related family practices), which we painstakingly collected from the parents of an astonishing 84 per cent of children in 46 schools in the Basingstoke and Deane area of the county (n=2014, Brown *et al.*, 2005). A third element incorporates ethnographic research in 12 of these sub-sample schools, examining composition and processes in relation to teaching groups and classes as well as schools.

As such, the study is intended to address many of the inadequacies of previous quantitative studies as well as provide more substantial qualitative evidence than has been available up to now. It is, however, focused only on primary schools, and is located in a relatively affluent and racially homogenous (white) area of the country. Similar approaches are needed in the secondary sector, in major urban locations, and over longer time periods.

## CONCLUSION

In this article we have argued for a greater concern with local contexts in practice, policy and research as a means of moving towards greater social justice in education. Local contexts go to the heart of numerous policy and practice issues including questions of school performance, accountability and funding, and appropriate approaches to pedagogy, curricula, assessment, organisation and management. Importantly, a focus on local contexts also raises the significance of "non-education" policies for education, e.g., urban renewal, income support, "full service" support (school-based) and employment and industry policies to stimulate economic and social development in local areas. They return us to the broader social and educational agenda noted by Anyon in the US context:

To really improve ghetto children's chances then, in school and out, we must (in addition to pursuing school based reforms) increase their social and economic well-being and status before and while they are students. We must ultimately, therefore, eliminate poverty: we must eliminate the ghetto school by eliminating the underlying causes of ghettoisation. Unfortunately educational 'small victories' such as the restructuring of a school or the introduction of a new

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49 'Hampshire Research with Primary Schools'. This is the ESRC project; 'Primary school composition and student progress', RES-000-23-0784. The project started in October 2004 and runs to March 2007.

classroom pedagogical technique, no matter how satisfying to the individuals involved, without a long-range strategy to eradicate underlying causes of poverty and racial isolation, cannot add up to large victories in our inner cities with effects that are sustainable over time (Anyon 1997: 164-165).

We have argued that research has a central role to play in bringing about change towards more contextualised policy and practice and have noted important shifts in the traditionally de-contextualised areas of school effectiveness and school improvement research, although we have argued that if we look at the detail of what is being said about context in these fields, there is still a considerable way to go. Meanwhile, large-scale school composition research should be capable of generating particular insights in this area because of its direct concern with context, but it will only achieve this if greater conceptual and methodological sophistication is applied. The challenge is to give up the false security of generic or too-simple models and approaches and develop a sound evidence base for a more socially just schooling system.

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# 5 Understanding and Addressing Achievement Gaps During the First Four Years of School in the United States

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## INTRODUCTION

One of the most urgent educational challenges in the United States is eliminating the large achievement differences among racial and ethnic groups (Jencks & Phillips 1998; Lee 2002; Rothstein 2004; Thernstrom & Thernstrom 2003). Although this challenge has existed throughout the history of the country, it has taken on increased urgency in the current era of educational accountability. This urgency is perhaps best reflected in the landmark federal legislation, the *No Child Left Behind* (NCLB) Act, which requires annual testing of students and holds schools and districts accountable for demonstrating annual progress in improving the achievement of *all* students. In fact, one goal of NCLB includes, “closing the achievement gap between high- and low-performing children, especially the achievement gaps between minority and non-minority students, and between disadvantaged children and their more advantaged peers” (U.S. Dept. of Education 2003: Title 1, Sec. 1001).

Existing research demonstrates that the achievement gaps between majority white students and disadvantaged black and Hispanic students on the National Assessment of Educational Progress are sizeable and have remained so for the past three decades (Lee 2002). Research also demonstrates that the achievement gaps are already sizeable even when students first enter kindergarten (U.S. Department of Education 2000). Research further demonstrates that achievement differences tend to increase as students progress through school (Jencks & Phillips 1998).

This study examines the gaps in achievement between three major racial and ethnic groups (blacks, Hispanics and non-Hispanic whites) during the first four years of elementary school and the factors that explain them. Although a large number of specific factors are examined, they constitute two distinct types that are related to two different approaches to reducing the achievement gaps. The first type deals with material conditions in students’ families and schools, which call for policy prescriptions to improve family and school resources. The second type deals with attitudes and behaviours, which call for policy prescriptions that respond to differences in students’ beliefs and attitudes, and respond to variations in family practices and schools. Moreover the two policy approaches tend to be associated with two political agendas – the first with a liberal agenda that focuses on increasing

resources to families and schools (e.g., Rothstein 2004) and the second with a more conservative agenda that focuses on improving student and parental behaviours and school practices *without* increasing resources (e.g., Thernstrom & Thernstrom 2003).

The study addresses the following questions:

1. What are the average differences in initial academic achievement among major racial and ethnic groups upon entry to kindergarten and how do these differences change during the first four years of elementary school?
2. What individual, family and school factors help explain these differences?

### RESEARCH ON ACHIEVEMENT GAPS

Researchers have long sought to understand and explain the vast racial and ethnic disparities in achievement that have always existed in the United States (Coleman *et al.*, 1966; Jencks *et al.*, 1972; Jencks & Phillips 1998; Lee 2002; Ogbu 1992; Rothstein 2004; Steinberg, Dornbusch & Brown 1992; Thernstrom & Thernstrom 2003). Although numerous investigations have been undertaken, there is no consensus about the primary cause of these disparities. Rather, researchers have identified a wide range of factors that contribute to educational achievement and have tried to determine the extent to which differences in the amount or effects of these factors explain differences in achievement. Although large in number, these factors vary along two primary dimensions.

First, they vary with respect to whether they focus on the attributes of individual students or the attributes of the three primary settings in which they live: families, schools and communities. Although student achievement is linked to individual attitudes, behaviours, and experiences, these individual attributes are shaped by the institutional settings in which people live (National Research Council and Institute of Medicine 2000). One challenge, therefore, is to determine the extent to which the backgrounds of individuals shape educational outcomes separate from the contexts and influence of institutional settings. Addressing this challenge is important not only to better understand achievement differences, but also to help determine where policy interventions should be targeted. If educational outcomes can largely be explained by individual attributes, such as ability and motivation, then policies should largely focus on responding to the background characteristics of students and their families. If, however, educational outcomes are driven more by school factors, such as the quality of the teachers and educational programs, then policies should largely focus on targeting school-level factors.

Addressing this challenge has also generated considerable controversy among scholars and researchers. The controversy began with the publication of the landmark *Coleman Report* in 1966. In the largest study of school effectiveness ever undertaken, Coleman found that schools only accounted for a relatively small proportion of the total variation in student test scores among different grade levels, ethnic groups, and regions of the country (1990:77). Since that time, virtually every study of school effectiveness has confirmed that most of the variation in student achievement is attributable to differences between students (and their families), rather than differences between schools (Lee & Bryk 1989; Rumberger & Palardy 2004;



Reardon 2003). Yet, despite the common interpretation that the Coleman Report and subsequent studies show that “schools don’t make a difference,” research clearly demonstrates that schools can still have a powerful and profound effect on student achievement. For example, one recent study found that students learned twice as much in some high schools compared to others (Rumberger & Palardy 2005). A more reasonable conclusion from existing research is that student achievement is influenced by both the actions and backgrounds of individuals and the actions and features of their families, schools and communities.

Second, the factors vary with respect to the types of attributes they identify. Although a wide array of specific attributes has been identified, they primarily are of two types. The first type concerns material resources. Many researchers have argued that the major factor that explains differences in student achievement has to do with disparities in material resources and conditions that exist among students, their families and their schools (Armor 2003; Rothstein 2004). For example, language minority students who are not proficient in English begin school with lower levels of achievement and progress more slowly in school than students from English-only backgrounds (Gándara, Rumberger, Maxwell-Jolly & Callahan 2003). In families, research has consistently found that parental socioeconomic status, most commonly measured by parental education and income, is a powerful predictor of student achievement for students from all racial and ethnic backgrounds (Betts, Rueben & Danenberg 2000; Entwisle, Alexander & Olson 1997; Guo & Harris 2000; Lee 2002). Because child poverty rates for blacks and Hispanics are more than twice as high as child poverty rates for whites (Snyder, Tan & Hoffman 2006), these differences contribute to differences in educational achievement among these groups, especially during the summer (Entwisle & Alexander 1995; Lee 2002; Roscigno 2000). Differences in family income also contribute to differences in access to preschool, which has been shown to impact school readiness and may contribute to differences in early school achievement (Barnett 1995). Finally, school resources have also been shown to affect student achievement (Betts *et al.*, 2000; Darling-Hammond, Berry & Thoreson 2001), although there is considerable controversy over whether financial resources or simply human resources matter, such as the quality of teachers (Hanushek 1997; Hedges, Laine & Greenwald 1994). Because ethnic and language minority students are more likely to attend schools with fewer resources, including qualified teachers, these differences also contribute to differences in student achievement (Betts *et al.*, 2000; Gándara *et al.*, 2003).

The second category of attributes that contribute to student achievement are the attitudes and behaviours of students, families and school personnel. At the student level, research has identified racial and ethnic differences in attitudes and behaviours among adolescents, including cultural differences in achievement motivation (Kao & Tienda 1995; Suarez-Orozco & Suarez-Orozco 1995). For example, Steinberg, Dornbusch and Brown (1992) found in their research that Asian adolescents were more successful in school than adolescents from other ethnic groups because of the influence of two cultural beliefs: (1) a belief that not getting a good education will hurt their chances for future success (rather than a belief that a good education will help their chances); and (2) a belief that academic success comes from effort rather than ability or the difficulty of the material. Yet to what extent these differences can

explain observed differences in achievement among ethnic and racial groups in early elementary school is unclear.

Differences in parental beliefs and practices may also contribute to differences in student achievement. Among adolescents, research has found that parenting styles, such as communication patterns and supervision between parents and their children, impact academic achievement (Dornbusch, Ritter, Leiderman, *et al.*, 1987; Park & Palardy 2004; Sui-Chu & Willms 1996). Yet while research has also found racial and ethnic differences in parenting practices, these differences do not appear to explain achievement differences (Sui-Chu & Willms 1996). Among young children, research has also demonstrated that these beliefs and practices are related to both socioeconomic factors, such as income and parental education (Guo & Harris 2000) and cultural factors (Gallimore & Goldenberg 2001). Yet research has not been able to show that differences in parental beliefs and practices can explain differences in achievement. For example, Guo and Harris (2000) found that literacy materials (i.e. children's books) and practices (i.e. mother reading to child) mediated the effects of poverty on intellectual development, but these factors did not account for racial differences.

Finally, a number of school practices, such as teacher beliefs and practices (Ashton & Webb 1986; Lee, Smith & Croninger 1997; Lee & Smith 1999; Phillips 1997), school organisation (Lee, Dedrick & Smith 1991; Newmann, Rutter & Smith 1989; Rowan, Raudenbush & Kang 1991), and parental involvement (McNeal 1999; Sui-Chu & Willms 1996) have been shown to affect student achievement. Yet most of this research has focused on high schools. There is relatively little evidence on whether teacher beliefs and school processes impact achievement in elementary schools<sup>50</sup>.

Differences in the relative importance of material resources versus attitudes and behaviours also have important implications for policy. If material resources are most important in affecting student achievement, then policies should be aimed at improving the material resources of students and the settings in which they live: their families, schools, and communities. If, however, attitudes and behaviours matter most, then policies should be aimed at addressing the differences in dispositions and behaviours of students, their parents and school personnel.

#### EXAMINING ACHIEVEMENT GAPS IN THE EARLY YEARS

This study uses data from the Early Childhood Longitudinal Study of the Kindergarten Class of 1998-99 (ECLS-K), a national sample of about 20,000 kindergarten students who entered about 1,000 public and private schools in the fall of 1998. The study is based on the kindergarten-third grade longitudinal cohort, a sub-sample of 9,018 students from the original study who were followed through third grade and for whom comprehensive student, parent, teacher and school data are available.

Two dependent variables were used in this study: *reading achievement* (language and literacy), which measures basic skills (print familiarity, letter recognition,

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50 For some exceptions, see Lee *et al.* (2006); Schacter & Thum (2004).

beginning and ending sounds, rhyming sounds, word recognition), vocabulary (receptive vocabulary), and comprehension (listening comprehension, words in context); and *mathematics achievement*, which measures skills in conceptual knowledge, procedural knowledge and problem solving. Both measures were based on one-on-one direct child assessments conducted by trained administrators primarily in students' schools (for more information, see NCES 2004).

Each assessment was administered up to five times: in the fall and spring of kindergarten and in the fall and spring of first grade, and in the spring of third grade.<sup>51</sup> Students identified by their schools or teachers as coming from a non-English speaking background were given an English language proficiency test to see if they were able to understand and respond to the assessment items in English. At the time of each assessment, children who passed the language screener received the full ECLS-K direct assessment battery. Children who did not pass the language screener, but who spoke Spanish, were administered a Spanish-translated form of the mathematics assessment. Other language minority children received a reduced version of the ECLS-K assessments.<sup>52</sup> The present study used scale scores for reading and mathematics in order to examine changes over time.<sup>53</sup>

The initial set of independent variables for the study was a series of dichotomous variables indicating the racial and ethnic minority groups (black, Hispanic, non-Hispanic white and other). The remaining independent variables were created from the ECLS-K data to measure characteristics identified in the literature review as important predictors of student achievement that might help explain the achievement gap. The variables measured two types of characteristics: material resources of students, families, classrooms and schools; and practices of students, families, teachers and schools. Material resources included students' language minority background (English-dominant, Spanish-dominant, other-language-dominant), disability, family socioeconomic status (based on family income, parents' education, and parents' occupational prestige) and family structure (living with both biological parents), whether the child attended preschool and had been retained, number of siblings under 18, number of books in the household, all day kindergarten program, class and school size, teacher credentials, whether the teacher reported adequate textbooks, and how much time was spent teaching reading and mathematics. Practice variables included students' learning behaviours (attentiveness, task persistence, eagerness to learn, learning independence, flexibility and organisation), parent and children reading activities, whether the parents volunteered at the school (as reported by the teacher), composite measures of the teachers' efficacy and expectations for student learning, teachers' perceptions of school leadership and professional community, and whether the school was private.<sup>54</sup>

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51 Only one quarter of the students were assessed in the fall of first grade.

52 See U.S. Department of Education (2004): 2-2 to 2-4, for more information.

53 As the ECLS-K user manual points out, gains at different points in the scale have different meanings in that they may connote qualitatively different reading activities (See U.S. Department of Education, National Center for Education Statistics 2004: 3-11).

54 Descriptions for all the variables used in the study are available at <http://education.ucsb.edu/rumberger/papers.htm>.

Since students in the ECLS-K data are nested within classrooms and schools, hierarchical linear modelling (HLM) was used in this study. HLM was developed to address problems specific to nested or multilevel data and is especially suited for modelling individual change, such as the growth in student achievement over time (Raudenbush & Bryk 2002). In the current study, we estimated a series of models for reading and mathematics achievement with different sets of predictor variables specified at three levels: level one models growth in achievement over time nested within students and schools; level two models the effects of student, family and teacher variables on differences in achievement growth among students nested within schools; and level three models the effects of school variables on mean achievement differences between schools after controlling for differences in the intake or background characteristics of students in the schools.<sup>55</sup> These models allow us to examine the initial achievement gap at the beginning of kindergarten and the gap in achievement growth or learning during four periods of time: (1) kindergarten, (2) the summer between kindergarten and first grade, (3) first grade, and (4) the period between the end of first grade and the end of third grade.<sup>56</sup> The first model only included the set of dichotomous variables identifying the four racial and ethnic minority groups. This model was used to assess the magnitude of the achievement gap. The second model included all the variables that measured student, family, classroom and school resources. The third model included all the variables that measured student, family, classroom and school practices.<sup>57</sup>

The results of this study are presented in two parts. First we examine overall differences in achievement and learning among major racial and ethnic groups during the first four years of elementary school. We focus on differences between white and black students and between white and Hispanic students, since blacks and Hispanics represent the largest racial and ethnic groups and have been the subject of extensive research. Then we attempt to explain these differences by examining the effects of resource and practice variables on achievement outcomes to see how much these factors can explain the achievement and learning gaps.

### THE SIZE OF THE ACHIEVEMENT GAP

We first examine the achievement gap at entry to kindergarten. The size of the achievement gap is expressed in a unit of measure known as an effect size, which represents the difference in achievement test scores as a fraction of a standard

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55 Because of student mobility, not all students attended the same school over the first four years of the study. Mobility was highest between the first grade and third grade (21 percent). So the school-level analysis was based on the school the student attended at the end of first grade.

56 The models allowed for random effects among students and schools for initial status and during all the periods except over the summer (due to a limitation in the degrees of freedom in the model). For summer learning, we estimated a nonrandomly varying slope (Raudenbush & Bryk 2002: 28).

57 A description of the models is available at <http://education.ucsb.edu/rumberger/papers.htm>

deviation (Cohen, 1988).<sup>58</sup> One of the benefits of using effect sizes (ES) is that it facilitates comparisons between different variables of interest within the same study and between different studies through the use of a common metric. It also facilitates comparisons between achievement differences and interventions that could be used to overcome them.<sup>59</sup>

The achievement gap in initial reading scores between whites and blacks is .38 standard deviations (SD), which is considered small, and the achievement gap between whites and Hispanics is .58, which is considered moderate.<sup>60</sup> The achievement gaps in initial mathematics scores are much larger: .71 SD for blacks and .76 SD for Hispanics. In both academic subjects, the white-Hispanic achievement gaps are larger than the white-black achievement gaps, especially in reading.<sup>61</sup>

Next we examined the gaps in learning during the first four years of school. These results, illustrated in Figure 5.1, show that the achievement gap widens during the first few years of school because of differences in learning rates, especially for blacks. During kindergarten, for example, the learning gap between whites and blacks is .38 SD, whereas the learning gap between whites and Hispanics is insignificant. The learning gaps in mathematics are much larger: .85 SD for blacks and .46 SD for Hispanics. Interestingly, the achievement gaps do not increase over the summer. During first grade, the achievement differences continue to widen. The white-black learning gap is .43 SD in reading and .52 SD in mathematics, whereas the white-Hispanic gaps are much lower – .26 SD in reading and .25 SD in mathematics. These trends continue during the second and third grades: the white-black learning gap is .34 SD in reading and .33 SD in mathematics; the white-Hispanic learning gap is .11 SD in reading and insignificant in mathematics.

What is the impact of these gaps in learning on the achievement gap by the end of third grade? We estimated the achievement gap at the end of third grade by taking the initial achievement gap in the fall of kindergarten and then adding the effects of the learning gaps over each period that we estimated in the model. The results are illustrated in Figure 5.2. They show that the achievement gap in reading remains steady at about half a standard deviation for Hispanics during the first four years of

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58 Because the outcome variable in the HLM analysis has two standard deviations, one associated with students and one associated with schools, we estimated effect sizes using the standard deviation in achievement growth at the student level.

59 It should be pointed out that the term *effect* does not imply a causal relationship between the predictor and the outcome.

60 Cohen suggests that effect sizes larger than .8 should be considered as large, those above .5 should be considered as moderate, and those above .2 as small (1988:24-27).

61 The larger gap in reading for Hispanics reflects the fact that the majority of Hispanics come from Spanish-speaking households, which tends to reduce their English proficiency. The HLM growth models allows us to estimate initial English reading levels for all Hispanic students, even those who were not yet proficient in English at entry to kindergarten and who were not given an English achievement test. As a result, our estimates of the size of the white-Hispanic achievement gap for initial reading are higher than other estimates. Fryer and Levitt (2004), for example, estimate a white-Hispanic achievement gap in mathematics of .72 SD, similar to our estimate of .76 SD, but estimate a gap of .43 SD in reading, compared to our estimate of .58 SD.

school, while for blacks, the achievement gap more than doubles, increasing from .39 SD to .82 SD.

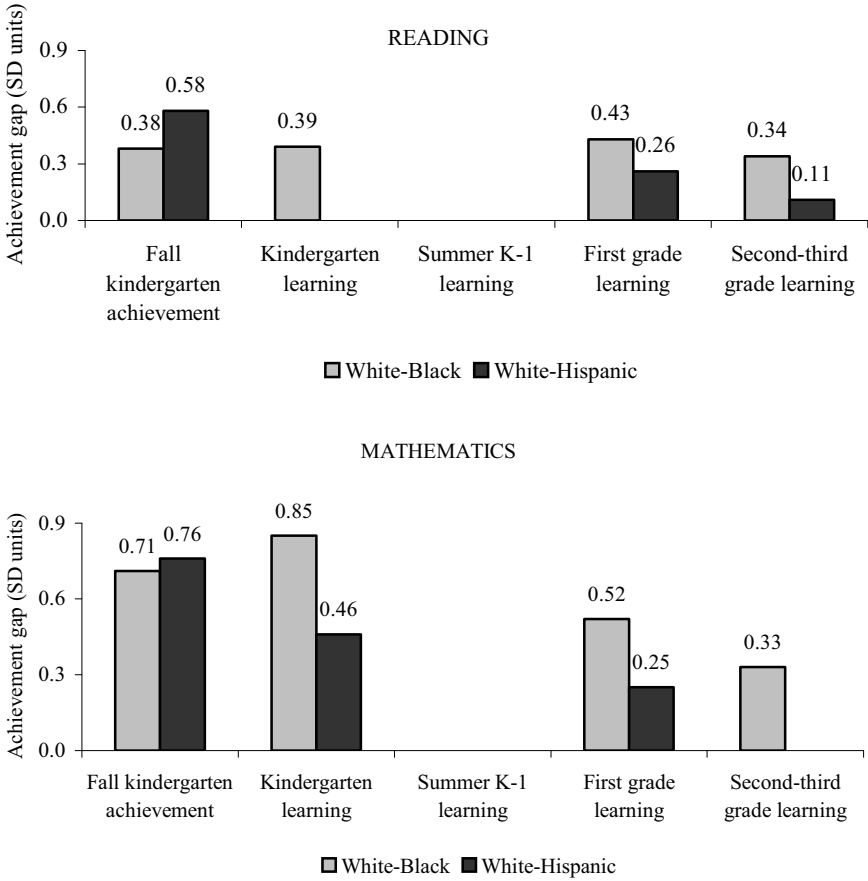


Figure 5.1: Achievement and Learning Gaps in Reading and Mathematics, 'White-Black' and 'White-Hispanic', Fall Kindergarten through Third Grades

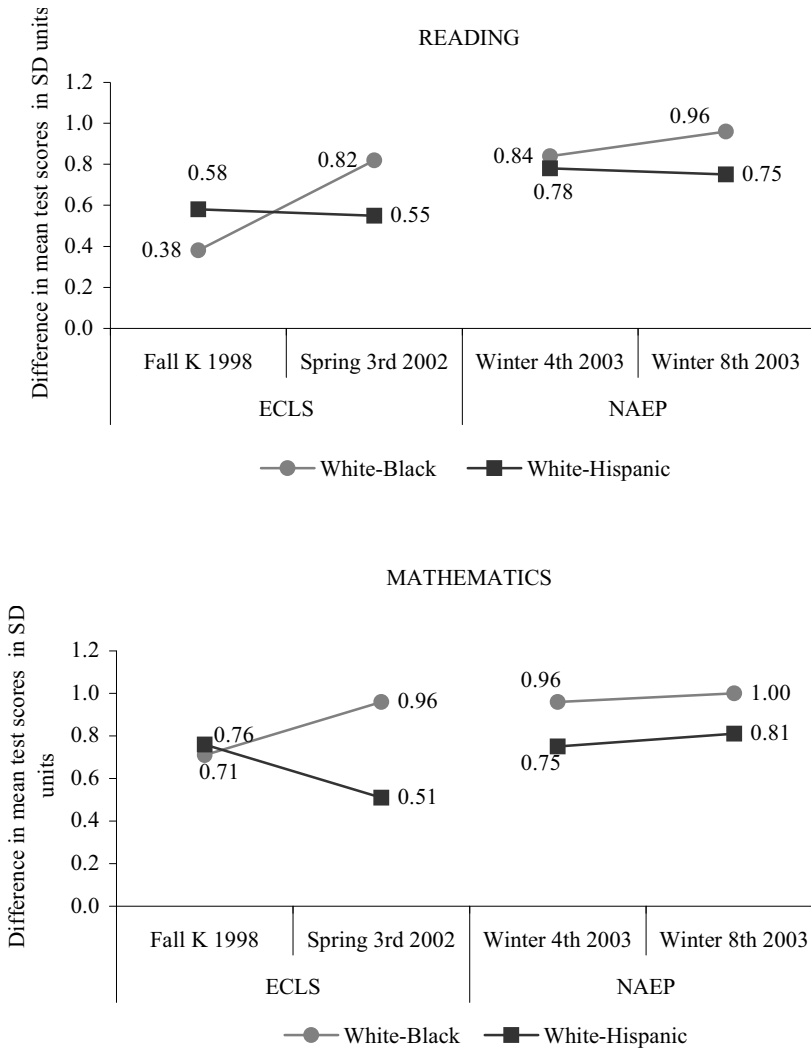


Figure 5.2: Achievement Gaps in Reading and Mathematics, 'White-Black' and 'White-Hispanic', Fall Kindergarten and Spring Third Grades (ECLS), Winter Fourth Grade and Winter Eighth Grades (NAEP)

The achievement gaps in mathematics take a different turn. Initial achievement gaps for both blacks and Hispanics are much larger in mathematics than in reading. For Hispanics, at least, the gaps narrow during the first four years of school,

declining from .76 SD to .51 SD. But for blacks, the achievement gap increases from .71 SD to almost a full standard deviation by the end of third grade.

The achievement gaps in kindergarten and third grades based on the ECLS achievement tests can be compared to the achievement gaps in the fourth and eighth grades based on the National Assessment of Educational Progress (NAEP), a national assessment administered periodically in mathematics, reading, science, history and writing. Of course these tests do not necessarily measure the same specific skills. In addition, estimates of the achievement gap based on ECLS are for the same sample of students over time (1998 and 2002), while the achievement gap based on NAEP are based on different samples of students at the same point in time, 2003. These caveats aside, the comparisons illustrated in Figure 5.2 are interesting.

For blacks, the achievement gaps in reading (.82 SD) and mathematics (.96 SD) based on the 2002 ECLS achievement tests are remarkably similar to the achievement gaps in reading (.84 SD) and mathematics (.96 SD) based on the 2003 NAEP. The NAEP data also suggest the white-black achievement gaps do not widen appreciably between the fourth and eighth grades. Comparisons over the entire nine-year period suggest that about half of the achievement gap in reading between whites and blacks is evident upon kindergarten entry and the other half occurs during the first four years of school. In mathematics, about two-thirds of the achievement gap is evident at kindergarten entry and the remainder occurs during the first four years of school, with little change thereafter.

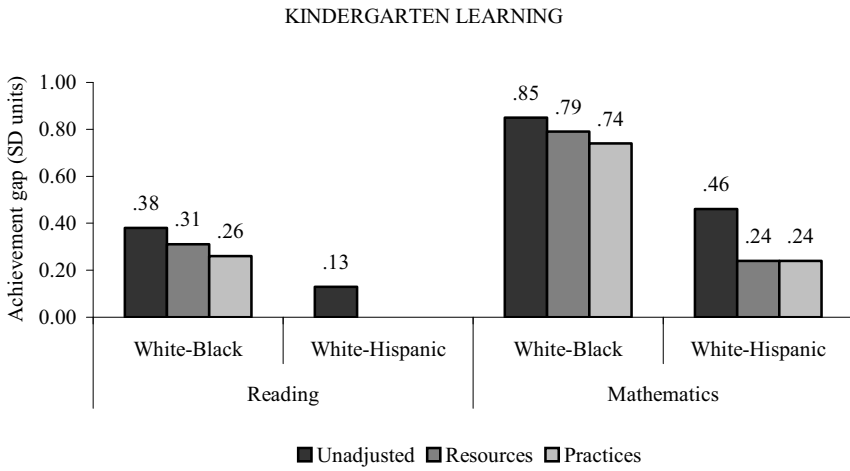
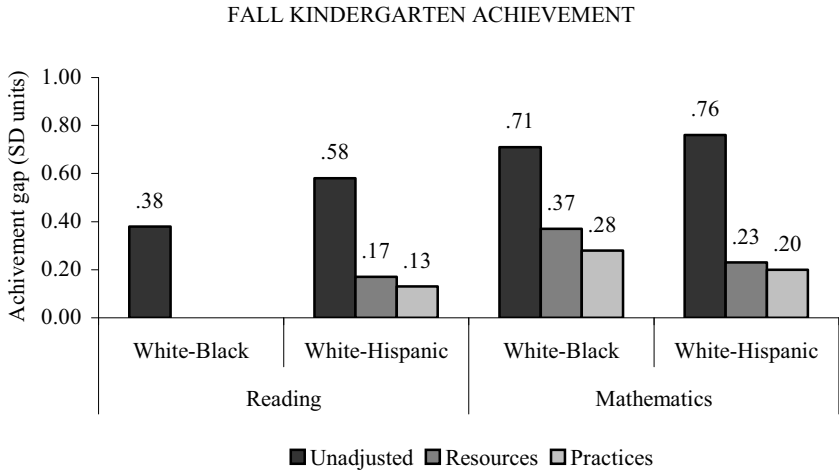
For Hispanics, the achievement gaps in reading and mathematics based on the fourth grade NAEP are larger than the third grade ECLS. In reading, the achievement gap at the end of third grade based on the ECLS is .55 SD, whereas in the winter of fourth grade, based on NAEP, the gap is .78. Similarly, in mathematics, the achievement gap in the spring of third grade is .51 SD based on the ECLS, but .75 SD based on the NAEP. Over the entire nine-year period, the data suggest about two-thirds of the achievement gap in reading between whites and Hispanics is evident at the beginning of school and most of the achievement gap in mathematics is evident at the beginning of school.

### EXPLAINING THE ACHIEVEMENT AND LEARNING GAPS

In the next phase of the study, we tried to explain the gaps in initial achievement and learning by introducing a series of explanatory variables in our statistical models. First, we introduced variables that measured individual and institutional resources. Next, we entered variables that measured individual and institutional practices. At each step, we examined the size of the achievement and learning gaps to see how much they changed after controlling for the predictors.

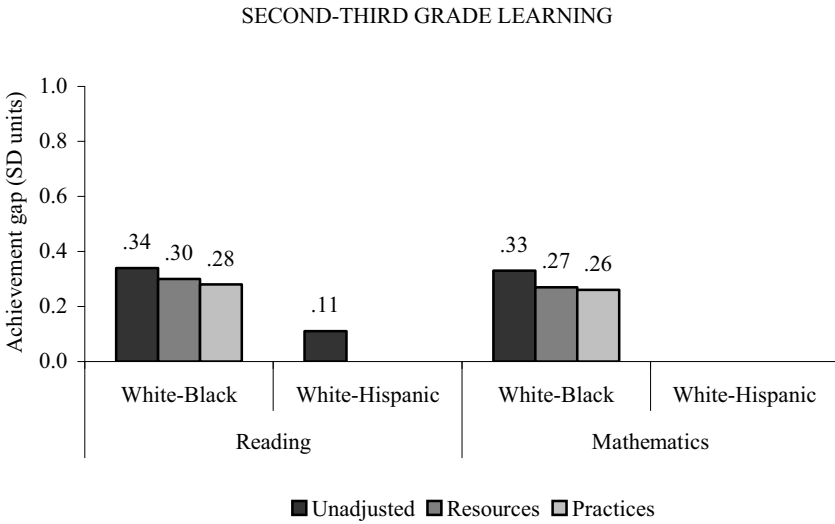
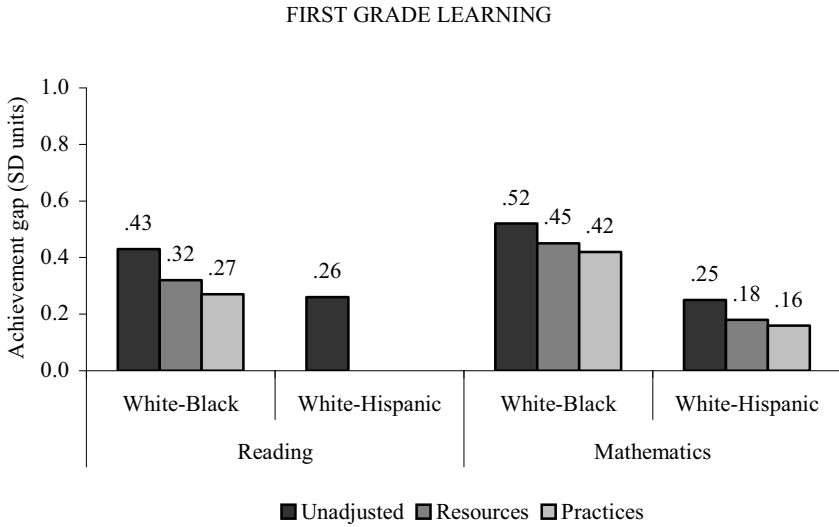
The results are illustrated in Figure 5.3. The first figure shows the extent to which differences in initial achievement could be explained by resource and practice variables. For reading, the entire white-black achievement gap and about two-thirds of the white-Hispanic achievement gap were explained by resource variables. For mathematics, about half of the white-black achievement gap and about two-thirds of the white-Hispanic achievement gap were explained by resource variables. Practice variables explained relatively little of the remaining achievement gaps.





*Figure 5.3: Reductions in Reading and Mathematics Achievement and Learning Gaps, 'White-Black' and 'White-Hispanic'*

Cont: Figure 5.3



Resource and practice variables explained little of the achievement gaps in kindergarten learning of reading or mathematics between whites and blacks. In contrast, the entire learning gap in reading and about half of the learning gap in mathematics between white and Hispanic students could be explained by the resource variables. Practice variables explained none of the remaining learning gap in mathematics for Hispanics.

First grade learning showed a similar pattern. Resource and practice variables explained only about 20 to 30 per cent of the achievement gaps in first grade learning of reading or mathematics between white and black students. In contrast, all of the learning gap in reading and about a quarter of the learning gap in mathematics between white and Hispanic students could be explained by the resource variables. Practice variables explained none of the remaining learning gap in mathematics for Hispanics.

Finally, learning during the second and third grades also showed the same pattern. Resource and practice variables explained only about 20 per cent of the achievement gaps in learning of reading or mathematics between white and black students. In contrast, all of the learning gap in reading between white and Hispanic students could be explained by the resource variables.

#### WHAT PREDICTS ACHIEVEMENT?

The analysis revealed a large number of factors that predicted initial achievement and learning during the first four years of school. A selection of the strongest predictors is shown in Table 5.1.

A number of factors predicted initial achievement at school entry. Family SES had an effect size of .24 SD in reading and .24 SD in mathematics. This means that students from families with one standard deviation higher SES had initial reading scores that were .24 SD higher. Students from larger families also had initially lower scores, especially in reading – students from families with a one standard deviation increase in the number of siblings (one additional sibling) had initial reading scores that were .2 SD lower. Students with disabilities and students from Spanish-dominant families also had lower initial reading and mathematics scores. Students who were attending kindergarten for the second time also had higher achievement in the fall of kindergarten (in this case, achievement was actually for their second year of school). Students who attended preschool the year prior to kindergarten had initial reading scores that were .22 SD higher and initial mathematics scores that were .24 SD higher than students who did not attend preschool. Finally, students with higher levels of engagement (positive learning behaviours) also had higher initial reading and mathematics scores. The effects of all of these predictors were net of the effects of the other predictors in the model.<sup>62</sup>

Some of the same factors that predicted initial kindergarten achievement also predicted kindergarten learning. Students from higher SES families had somewhat higher learning rates in reading (.07 SD) and mathematics (.16 SD), and students who were more engaged had higher learning rates in reading (.22 SD) and even

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62 Results of the modelling are available at <http://education.ucsb.edu/rumberger/papers.htm>.

higher learning rates in mathematics (.37 SD), whereas students with disabilities had lower learning rates in both reading (-.18 SD) and mathematics (-.12 SD). Yet students who were repeating kindergarten had much lower learning rates in both reading (-.56 SD) and mathematics (-.48 SD) than first-time kindergarteners. Students who attended all-day kindergarten had higher learning rates in both reading (.24 SD) and mathematics (.37 SD). Finally, students who missed more than 10 days of school had somewhat lower mathematics learning rates (-.10 SD) than other students.

Table 5.1: Selected Predictors of Reading and Mathematics Achievement and Learning

	Reading	Mathematics
Achievement Fall Kindergarten		
<i>Family SES</i>	0.24	0.25
<i>Disability</i>	<b>-0.13</b>	<b>-0.22</b>
<i>Spanish dominant</i>	<b>-0.28</b>	<b>-0.38</b>
<i>Number of siblings</i>	<b>-0.20</b>	<b>-0.07</b>
<i>Repeated kindergarten</i>	0.47	0.12
<i>Attended preschool</i>	0.22	0.24
<i>Engagement</i>	0.21	0.27
Kindergarten Learning		
<i>Family SES</i>	0.07	0.16
<i>Disability</i>	<b>-0.18</b>	<b>-0.12</b>
<i>Repeated kindergarten</i>	<b>-0.56</b>	<b>-0.48</b>
<i>All day kindergarten</i>	0.24	0.37
<i>Engagement</i>	0.22	0.37
<i>Absent more than 10 days</i>	<b>-0.10</b>	NS
First-grade learning		
<i>Disability</i>	<b>-0.15</b>	NS
<i>Repeated kindergarten</i>	<b>-0.36</b>	<b>-0.16</b>
<i>Engagement</i>	0.29	0.21
<i>Absent more than 10 days</i>	<b>-0.13</b>	<b>-0.12</b>
<i>School mean SES</i>	0.13	NS
<i>School mean engagement</i>	0.25	0.05
Second-third grade learning		
<i>Repeated kindergarten</i>	NS	<b>-0.20</b>
<i>Engagement</i>	0.11	0.12
<i>Absent more than 10 days</i>	0.13	NS
<i>High minority school</i>	<b>-0.11</b>	NS

Note: Negative effects are presented in bold. NS=Not significant.

Some of the same predictors for kindergarten learning also predicted first grade learning. Students with disabilities had lower learning rates in reading (-.15 SD) and students who repeated kindergarten also had lower learning rates in both reading (-.36 SD) and mathematics (-.16 SD). Students who were more engaged also had higher learning rates in both reading (.29 SD) and mathematics (.21 SD), whereas

students who were absent more than 10 days during the school year had lower learning rates in reading (-.13 SD) and mathematics (-.12 SD). Two school contextual variables also contributed to student learning rates – students who attended schools with higher SES students had higher reading scores (.13 SD) and students who attended schools with more engaged students learned more, especially in reading (.25 SD).

There were fewer predictors of learning in the two-year period between the end of first grade and the end of third grade. Students who repeated kindergarten had lower learning rates for mathematics (-.20 SD) and students with more positive learning behaviours had higher reading (.11 SD) and mathematics (.12 SD) scores. Students who attended high minority schools had somewhat lower reading scores (.11 SD).

### ADDRESSING THE ISSUE OF ACHIEVEMENT GAPS IN THE EARLY YEARS

The United States is in a period where there is widespread interest in understanding and addressing the large and persistent achievement gaps between racial and ethnic groups, particularly between the more advantaged and academically successful white and Asian populations and the less advantaged and academically successful black and Hispanic populations. This interest is fuelled in part by the growth of the disadvantaged populations, especially Hispanics, who will soon constitute the largest ethnic group in several states.<sup>63</sup>

This study utilised data from a national longitudinal study of a cohort of kindergarten students to examine the size of the achievement gap between whites and blacks and between whites and Hispanics at the beginning of kindergarten and how the achievement gap changed over the first four years of school. The analysis revealed that the achievement gap is already sizeable when children first begin school. But whereas the gap widens for black students during the first four years of school, for Hispanics it narrows in mathematics and remains about the same in reading. Yet comparisons with another national assessment show that the achievement gaps for both groups increase in late elementary and early secondary school.

The study also examined the extent to which the achievement gap could be explained by two different types of factors — individual, family and school resources, and individual, family and school practices. Distinguishing between the relative effects of these two types of factors has important policy implications because if disparities in achievement are due largely to disparities in resources, then to close the achievement gap will require substantial investment in the resources of disadvantaged students and their families and schools. If, however, disparities in achievement are due largely to disparities in practices, then to close the achievement gap will require changes in the practices of disadvantaged students and their families and schools. This may also require an investment in resources, but perhaps less than in the former case.

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63 See U.S. Census projections of state populations by race and Hispanic origins (<http://www.census.gov/population/www/projections/stproj.html>).

The study found that differences in resources explained all or a substantial part of the initial achievement gaps between whites and blacks and between whites and Hispanics upon school entry. For example, adjusting for differences in resources reduced the observed white-black achievement gap in reading from .38 SD to zero and the achievement gap in mathematics from .71 SD to .37 SD. Adjusting for differences in resources reduced the observed white-Hispanic achievement gap in reading from .58 SD to .17 SD and the gap in mathematics from .76 SD to .23 SD.

Resources were also able to explain some of the learning gaps between whites and Hispanics during the first four years of school. In fact, resources explained the entire reading gap during kindergarten (.13 SD), first grade (.26 SD), and second-third grade (.11 SD). Resources also explained about half of the mathematics gap during kindergarten (from .46 SD to .24 SD) and about one-quarter of the mathematics gap during first grade (from .25 SD to .18 SD). But neither resources nor practices were able to explain much of the learning gaps between whites and blacks during any of these periods. Of course this does not mean that resources or practices do not contribute to the achievement gap, only that the variables in the study were unable to detect them.

The analysis further identified an array of factors that predicted initial achievement and learning during the first four years of school. These factors represented both resource variables and practice variables. For example, family SES and size, two measures of family resources, had significant effects on initial achievement. Since black and Hispanic students typically come from larger families and families with lower SES, these differences help explain some of the initial differences in achievement when students begin school.<sup>64</sup> Similarly, preschool was a significant predictor of initial school achievement, and because black and Hispanic children are less likely to attend preschool than white children, these differences can also explain differences in the initial achievement.<sup>65</sup> Some resource variables also predicted learning. For example, students attending all-day kindergartens had higher learning rates during kindergarten than students who attended part-day kindergartens.

Yet variables that measured practices also predicted achievement and learning. In particular, students with higher levels of engagement not only had higher initial achievement at the beginning of their school careers, they also learned more during the first years of school. And differences in engagement also help explain achievement differences. For example, black children's average level of engagement was .39 SD lower than white children's at the beginning of kindergarten and Hispanic children's average level of engagement was .13 SD lower than white children's.

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64 In our data, the gap in family SES between white and black children was .53 SD and between white and Hispanic children it was .62 SD.

65 In our data, only 34 per cent of black children and 28 per cent of Hispanic children were enrolled in centre-based care as their primary type of nonparental care the year before kindergarten, compared to 49 per cent of white children. Although black and Hispanic children are more likely than white children to attend a federal preschool program, Head Start, our analysis found no educational benefit from this program even though others have (Currie & Duncan 1995).

Overall, the study found that both resources and practices influence student achievement in the first four years of elementary school. Yet while these factors help explain a lot of the achievement gap between white and Hispanic students, they do little to explain the achievement gap between white and black students. Why this is the case is not clear, but this finding has been confirmed by other researchers (Downey, von Hippel & Broh 2004; Fryer & Levitt 2004). Some scholars have suggested it relates to discrimination in such educational practices as retention and ability grouping (Farkas 2003). Others have argued that it has to do with teachers' perceptions and expectations that differ by race (Diamond, Randolph & Spillane 2004; Ferguson 1998a). Still others argue that it has to do with the fact that blacks tend to attend more segregated schools with fewer resources and poorer teacher quality (Ferguson 1998b). Yet Hispanics also attend segregated schools with fewer resources (Orfield & Lee 2006). So this issue remains one that needs to be addressed.

The study also provides some insight into possible policy responses to eliminating the achievement gap. Because this and other studies have found that the achievement gap is sizeable when students first begin school, then attempts should be made to reduce it prior to school entry (Downey, von Hippel & Broh 2004; Fryer & Levitt 2004). The expansion of preschool targeted to disadvantaged students would help. Because advantaged students are more likely to enrol in preschool than disadvantaged students, these differential patterns actually contribute to the current achievement gap. Reducing the disparity in attendance would help reverse this.

Another intervention that could reduce the achievement gap would be the expansion of all-day kindergarten, which this and other studies have found to improve learning (Lee, Burkam & Ready, *et al.*, 2006). Yet such an expansion would only help reduce the achievement gap if it favoured disadvantaged students.

In fact, any efforts to reduce the achievement gap would only be effective to the extent that such efforts favoured or focused on disadvantaged student populations, such as blacks, Hispanics or the poor. Many industrialised countries have a much smaller achievement gap than the one in the United States. In fact, a recent UN study found the U.S. ranked 20<sup>th</sup> out of 24 OECD countries in a composite measure of achievement disparities between children at the bottom of achievement distribution and those in the middle (UNICEF 2002: Figure 4). Part of the explanation for this high relative disparity has to do with poverty. Another recent UN report found that the U.S. ranked 23<sup>rd</sup> out of 24 OECD countries in "relative poverty," defined as 50 per cent of the national median income, even though the poverty rate declined in the 1990s (UNICEF 2005: Figure 1). These findings suggest that one of the root causes of educational disparities, especially when children begin school, is related to economic disparities. It also suggests that educational interventions, by themselves, are unlikely to be able to eliminate the achievement gap without concurrent interventions designed to reduce child poverty and economic inequality (Armor 2003; Rothstein 2004).

The challenge of improving educational opportunity in the United States was clearly stated by Coleman more than 35 years ago:

In some part, the difficulties and complexity of any solution derived from the premise that our society is committed to overcoming, not merely inequalities in

the distribution of educational *resources* (classroom teachers, libraries, etc.), but inequalities in the opportunity for educational *achievement*. This is a task far more ambitious than has even been attempted by any society: – not just to offer, in a passive way, equal access to educational resources, but to provide an educational environment that will free a child’s potentialities for learning from the inequalities imposed upon him by the accident of birth into one or another home and social environment (1967: 20-21).

This challenge is no less formidable today.

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## 6 The Development of Vocational Programs in Secondary Schools

### Victoria and the European Tradition

*John Polesel*

#### INTRODUCTION

Fourteen years ago, Goodson argued that, despite radical changes in the structures of schooling, “the underlying fabric of curriculum has remained surprisingly constant” (Goodson 1993: 22), with the academic curriculum continuing to dominate the operations of secondary schools. He went on to note that practical or vocational studies, despite their growing role in the secondary school curriculum, continued to be regarded as lower status curriculum options (Goodson 1993: 22). The view that school subjects are manifestations of the social construction of knowledge and that they occupy a status hierarchy has become an accepted part of educational scholarship since the work of Bernstein (1971, 1973, 1977) and Goodson (1993, 1997). This is particularly true in recent analyses of the growth in vocational subjects in schools or using Goodson’s language, the utilitarian curriculum. The marginal status of the vocational curriculum is linked in academic discourse to its undistinguished lineage as an option for the children of the poor. Its low status has also been linked to its lack of examination-sanctioned credibility and to its very recent entry to the realm of secondary schooling.

Tensions between a view that vocational studies have democratised the curriculum and a view that they have contributed to social segregation along the lines of socioeconomic status have further weakened their credibility as a social and economic tool in public policy. Contributing to this weakness has been policy vacillation regarding the most effective mechanisms of delivery; this ranges from delivery in differentiated settings, where it is argued that the culture and status of VET are defended from the hostile encroachment of the academic curriculum but in which social (and often precipitate) segregation is the inevitable outcome, to delivery in comprehensive settings, where it is argued that greater permeability between the academic and vocational tracks is permitted, but where the cultural dominance of academic studies dilutes the quality and status of vocational programs.

In relation to the argument over democratisation, the increasing value of vocational subjects in catering for the growing numbers of children completing secondary school has been acknowledged (Polesel 2000; Malley *et al.* 2001; Teese

and Polesel 2003). In Australia, vocational subjects have come to occupy an increasingly larger share of the curriculum space available to secondary school students. Between 1996 and 2003, the proportion of senior secondary school students enrolling in vocational subjects has increased from 16 per cent to 48 per cent (MCEETYA 2003). In relation to delivery mechanisms, the current phase of the cycle favours delivery within comprehensive settings, although it can be argued that the powerful role played by selective state schools and non-systemic independent schools has resulted in a *de facto* mechanism of differentiated provision. Moreover, recent federal government and state government initiatives to establish technical and vocational specialist providers has seen an ideological shift back towards differentiation. Within this fluid policy framework, what is the evidence of the value of these subjects in democratising the curriculum or is the argument mounted by Goodson fourteen years ago that VET programs occupy a shadow-land of low esteem still valid? Goodson's views have been given credence by more recent thinkers, who argue that VET studies are not equally valued by the consumers of education or given equal status by policy makers (Labaree 1997; Blunden 1996). So while mass secondary education and the complex and diverse needs of modern post-industrial Western nations have ensured that vocational education and training are firmly entrenched in the modern educator's view of secondary education, does the paradigm of the high school as guardian of the academic curriculum and a corresponding view of the illegitimacy of school-based vocational studies persist as we enter the 21<sup>st</sup> century?

This paper tests the proposition that vocational programs, valuable as they are, continue to perform a largely residual function in catering for the educational needs of students from the most economically disadvantaged families. It also argues that these programs may assist schools in 'managing' diversity but play an ambiguous role at best, if we accept that VET both provides alternatives for the weakest learners while also channelling failure away from the protected academic streams, and thus relieving schools of the tensions involved in catering for a clientele with increasingly broader needs.

This chapter begins by examining the European traditions of secondary schooling which have informed the development of schooling systems in Australia, and seeks to locate vocational education and training subjects in their socio-historical context. It then examines the contested and bitter history of the technical and vocational curriculum within the Australian state of Victoria, in order to analyse the cultural and social foundations of the current system of vocational education and training in that state. Finally, it draws on the findings of a survey of the post-schooling destinations of 30,000 school completers in Victoria to examine whether the socioeconomic profile of students enrolled in vocational programs differs from that of students enrolled in traditional university-preparatory programs and to examine the current status and role of vocational programs in Victorian secondary schools.

## THE EUROPEAN TRADITION OF SECONDARY SCHOOLING

The argument that vocational or practical studies have no place in the secondary curriculum has a long history, and is culturally enshrined in the valorisation of the classical curriculum typical of European schools since the Renaissance. Secondary schools based on the teaching of Latin and Greek (and usually conducted in the instructional medium of the Latin language) were founded during and after the Renaissance throughout Europe and remained largely unchanged and unchallenged until the mid-eighteenth century. Intended to facilitate the inculturation of young men into the manners and disposition of the ruling class, this elite form of schooling only began to be questioned when the requirements of the state began to change. Modernisation, in the form of technical and scientific innovation, began to create a demand for technological and administrative literacies not conferred in the schools of the classical (lyceum/gymnasium) type. A growing middle class, too, made up of shopkeepers, professionals and industrialists, began to demand education beyond the primary years for its children.

Conflict arose as the demands of the middle classes and the growing need for technologically literate administrators placed pressure on the classical schools to broaden their mission or, at least, to allow alternative providers. Such conflict was bitter and long fought. The growth of non-classical 'grammar' schools in late 18<sup>th</sup> century Germany, for example, was abruptly stopped when an 1812 reform of the Learning Examination decreed that only the classical (Gymnasium) schools could prepare secondary school students for university. Not until 1901 were schools other than those teaching the classical curriculum mandated to perform a university-preparatory function, finally allowing the *Realgymnasium* (with a semi-classical curriculum) and the *Oberrealschule* (modern languages and sciences) to exist side by side with the 'Gymnasium', although the opposition of the 'mandarins' (the academic guardians of orthodoxy) to the modernisation of the secondary school curriculum (and to that of higher education) would continue for at least another thirty years (Ringer 1969). Similarly, in France, the *écoles primaires supérieures* were established, largely by municipal bodies, to provide alternatives to the classical studies of the lycées, but their growth was sluggish through the 19<sup>th</sup> century, hampered by exorbitant fees, by problems of access (most were located in Paris or in other large cities only) and by a perception that the curriculum taught did not always meet the needs of local communities (Maynes 1977). Moreover, there was a strong perception that these schools were of a lower status as they did not confer upon students the privilege of entry to university (Good 1960). The struggle in France to broaden the curriculum in secondary schools beyond the realm of the classical so as to include modern languages, history and sciences largely paralleled that in Germany through the 19<sup>th</sup> century and suffered a similar lack of success (Good 1960). Only in 1902 (at almost the same time as in Germany) was a scientific, non-classical stream finally introduced to the *lycée* system in France, although Good (1960: 310) notes that it 'did not succeed in winning equal prestige among the French people'. Ringer (2000) notes that social segregation remained a strong feature even at this level, effectively quarantining the bourgeoisie in the classical schools from the lower middle-class patrons of the modern secondary schools.

In England, a similar story may be told. The Great Public Schools and the Grammar schools, private institutions which were substantially funded by the state, dominated the 19<sup>th</sup> century history of educational provision and provided a classical studies curriculum very much in the Continental style. Despite broad recognition that these schools were neglecting the mathematics and sciences, they used their connections with Oxford and Cambridge to cement their status and influence, while alternative approaches failed to attract the support of the state (Roach 1986). Attempts to establish “modern” secondary schools, which would teach the sciences in place of Ancient Greek, foundered upon the universities’ refusal to consider selecting students who had not studied Greek at school (Roach 1991). In all these nations, the university-controlled examination systems ensured which aspects of the secondary school curriculum would thrive and which would not. Again, as in France and Germany, it was not until the beginning of the 20<sup>th</sup> century that serious state involvement in secondary education in England (through the Education Act of 1902) enabled the establishment of public secondary schools with a broader non-classical curriculum. These new schools were now able to include modern languages and the sciences in their curriculum, although the classical tradition continued to demand higher prestige and most in fact continued to teach Latin, too. In Italy, the design of the classical studies high school, *liceo classico*, closely followed the lines of the French model and in one instance, that of the *Liceo Foscarini* in Venice, the school was actually established by French decree. This occurred in 1802, after northern Italy had come under the control of the invading French. Subsequent administrations over the next 60 years, variously French or Austro-Hungarian, ensured that the development of secondary education continued to adhere closely to the classical *lycée/Gymnasium* model. The birth of a “modern” *liceo*, which departed from the classical curriculum, finally occurred in 1911, when Law 860 established the *Liceo Moderno*, a school which taught sciences and modern languages. The present structure of science-based (*liceo scientifico*) and humanities-based (*liceo classico*) high schools, however, did not come into existence until 1939 when the fascist government established the *liceo scientifico*. Even then, a status differentiation remained, with the classical studies school allowing access to all university faculties, while the scientific one allowed access only to related university faculties (mathematics, science, engineering, etc.).

What is striking for the modern observer of the debates in all these nations is that vocational or practical studies played virtually no part in the options proposed. By the beginning of the 20<sup>th</sup> century, most secondary school systems in Europe had evolved to the extent that the non-classical curriculum had established a role for itself that was formally equal in status to the old classical curriculum in preparing the élite for entry to university. The existence of the scientific *liceo* in Italy, the modern (non-classical) *lycée* in France, the semi-classical *Realgymnasium* and the modern *Oberrealschule* in Germany and the public secondary schools in England are all testaments to the progress made in establishing the status of the modern (non-classical) curriculum in European secondary schooling. However, vocational studies were required to wait much longer before establishing a permanent and centrally sanctioned presence in the secondary curriculum, such as we now recognise in most European systems.

The reasons for this may be found in the historically different social role that practical studies were required to perform and in what has been described as a close relationship to “national ‘work cultures’” (Greinert 2005). While inculturation of the children of the élite into the role of government and administration may have been the role of the *lycée/gymnasium/liceo/grammar school* (classical or otherwise), the role of vocational training was to foster good work habits in the children of the poor (Maynes 1977) and to meet emerging labour market needs. The first vocational schools began to appear in Europe in the late 18<sup>th</sup> and early 19<sup>th</sup> centuries, sometimes administered or supported by guild associations, sometimes established by local or municipal authorities concerned by skills shortages. Rarely were they state-sanctioned or state-administered institutions, which were supported by a central bureaucracy and treated on a par with the classical schools. It is not until the early years of the 20<sup>th</sup> century (or even later in some nations) that state system bureaucracies began to treat the administration of vocational and university-preparatory schools as a single function.

Of the four systems under consideration in this introduction, Germany’s was one of the earliest to integrate vocational education into what might be described as a systemic approach. In Germany, vocational schools were a significant feature of the educational scene from the 1850s onwards, but most were established by industry or local government, with the imperial authorities notably reluctant to legislate for adequate provision and access to vocational schooling (Good 1960). However, a late nineteenth-century revival in apprenticeship training formed the basis of what would become a strong, system-wide approach to combining general (and moral) education in part-time schools with industry-based training. This approach, far ahead of its time, made attendance at such schools compulsory for all young people not enrolled in other secondary education, but was not fully implemented until 1938 (Mitter 1995).

In Italy, the Casati legislation of 1861 broadly sanctioned the division of secondary schooling into university-preparatory and vocational, although vocational schools remained outside the administration of the central state and it was not until the Gentile reforms of the fascist administration in 1923 that the control of both types of secondary schooling came under the wing of a centralised state system. Furthermore, the *istituto tecnico* would wait until 1931 and the *istituto professionale* until 1938 to attain the status of senior secondary schools (CEDEFOP 1999).

In France, the monopolistic sway of the university-preparatory secondary school was even more tenacious. Primary schooling had long been considered sufficient preparation for the world of manual work and it was not until after the Second World War that the system of secondary schooling was expanded to include technical and industrial studies (Good 1960).

In the UK, the gradual establishment of commercial schools and Mechanics’ Institute schools from as early as the 1840s was a sign that alternatives to the grammar schools were desperately needed, but growth in the area was painfully slow, hampered by a heavy dependence on fees and the scarcity of enrolments (Roach 1986). The relegation of vocational education and training, firstly to the elementary school sector and then to a kind of limbo made up of junior technical schools and higher elementary (or central) schools ensured that they would not be



considered on the same status terms as secondary schools (Goodson 1993). Fully one hundred years would pass before the 1944 Education Act finally brought vocational education under the wing of the state, through the introduction of the 'Tripartite System', one component of which was intended to be the technical schools. In fact, very few of these were ever established, and debates over the relative advantages of comprehensive and differentiated provision were never conclusively settled in that nation. Even in the current policy wars over models of post-16 provision, no national direction has been set and an assortment of specialist, comprehensive and non-school providers compete for the clients of senior secondary education and training.

In summary then, it can be seen that vocational educational education and training are now an accepted part of the broader role played by secondary schools in most European systems, though, as we have seen, theirs is a relatively recent introduction dating back no further than the 1930s and usually much later. It may be argued that this acceptance of vocational education and training within the broader state-sanctioned structures of secondary schooling reflects an acknowledgment of the same economic demands for technological competencies which accompanied the emergence of the modern secondary school. Technical and scientific innovation have required more advanced skills not only in professionals and managers, but amongst workers more generally, while the globalisation of production processes and increased international economic competition have led to increasing state demands that VET be harnessed to serve the interests of national economies (Jephcoate and Abbott 2005).

However, the location of VET within binary structures of administration has established a division of labour between those schools teaching students destined for university and those teaching students destined for an expedited entry to the labour market. This is accompanied by continuing evidence of status differentiation between these two types of schools and of continued social selectivity in their intakes (see Fini (2002) and Cobalti and Schizzerotti (1993) for an example with respect to Italy) reflecting patterns of occupational and status differentiation which have been evident in European secondary schooling structures since their inception. Moreover, issues of when in the age cycle of a young person is the best time to introduce vocational options, what mix of academic and vocational programs is ideal and whether differentiated or comprehensive provision are to be preferred remain contentious and divisive (Jephcoate and Abbott 2005). Ahier (1991) adds that in the British context prevailing "anti-industrial" sentiment further erodes the status of vocational programs.

The content of the vocational curriculum and its relationship to general or academic secondary programs have provided a further source of friction. While the academic curriculum has been subject to remarkable stability and treated as canonical, often due to the power of universities and examination boards over its content and delivery (Goodson 1993), vocational studies have been controversial, their establishment contested and their form subject to the interests of competing stakeholders. Various embedded within senior secondary curricula or excluded on the basis of a lack of examination-sanctioned credibility, variously graded for the purposes of university entry or confined to competency-based assessment

procedures (or both or neither) and variously delivered by schools, senior secondary providers, private training organisations or adult-oriented VET providers, there is little consensus evident in terms of the philosophy and objectives of vocational programs for school-aged clients.

*Vocational education and training and social segregation in the Australian state of Victoria*

The historical, social and curricular context for the delivery of vocational programs in the Australian state of Victoria is not so different from the one we have described in this introduction. Educational provision in this state has largely appropriated the cultural and educational traditions of its European heritage, even mirroring some stages of its development, at least from the mid-19<sup>th</sup> century onwards. Policy debates have largely reflected the difficult issues faced by the European systems: demand for technologically advanced labour, cultural resistance in secondary schools and the dangers of social segregation. Some of the bitterest debates regarding the legitimacy of the modern curriculum were largely avoided, with the mathematics, sciences and modern languages accorded an early and central place in schools' curricula. As Keating (2000) has noted, entry to the University of Melbourne (established in 1853) was governed by the matriculation examination, and the schools which prepared young people for this examination were denominational private schools with a curriculum which included both the *modern* and the *classical* subjects.

However, the strength of these private schools (largely modeled on their English grammar school antecedents) meant that the vocational curriculum had no theatre of operation. The state's sphere of influence was largely restricted to primary schooling, as a result of a political consensus which partitioned schooling into a primary sector which was largely state sponsored and a secondary sector which was almost exclusively the domain of the independent church schools. Consequently, the nation-building and capacity-building needs of the state, as also identified in the European nations we have discussed, could find little outlet in the state's schools. Prior to the establishment of the first state secondary school (a "continuation" school) in 1905, there was no state instrument for the development of the scientific and technological competencies needed by a young, emerging economy. Indeed, in justifying the need for its expansion into the secondary sector, the state argued explicitly at the time that state secondary schools were required to address the need for trained workers, a need which was also regarded as aligning with those of working-class children: "the class of students for whom provision would be made by continuation schools would be largely the children of the working-classes" (Education Department of Victoria 1973: 437). In this respect, care was taken by the authorities to emphasise that the extension of the state's influence into the secondary sector was not an attempt to compete with the established private schools, specifically not to transmit that which might be deemed as "general culture" (Education Department of Victoria 1973:439), but to prepare the sons of the working-classes "for some special trade or occupation" (Education Department of Victoria 1973: 439). As might be discerned, the needs of the 'daughters' had advanced little in the consideration of the policy makers of the time from the point at

which they were when the classical schools of Europe began to be established, although this is the subject of another study.

From this official perspective, the first state secondary school (the Melbourne Continuation School) opened in 1905, and the agricultural high schools and technical schools designed to train teachers which followed soon after were regarded as strongly vocational in orientation, i.e. leading to specific occupational destinations. As such, they marked the first steps towards a system of technical training in Victoria. However, it is now an issue of some debate as to whether these schools really were intended to restrict their mandate to the training of workers. Certainly their curriculum was not narrowly vocational (Education Department of Victoria 1973:438) and in 1905, the premier of Victoria made it clear that one of the tasks of the Melbourne Continuation School was to assist poor children in gaining access to the University of Melbourne. To the representatives of the interests of the private schools, this was tantamount to confirmation of their suspicions that the tentative steps of the state into secondary schooling were no less than a state-sponsored subterfuge for encroaching on the territory of the private schools (Keating 2000) rather than simply an attempt to broaden the scope and reach of the secondary curriculum. The state's recommendation in 1908 that there be a rapid expansion of state secondary schooling served to further confirm these fears and the State Education Act of 1910 provided the instrument for this expansion to occur.

In reality, the motives for the state's entry into secondary school provision were numerous and complex. The expansion of technical education and training, since the establishment of the first technical schools for adults in 1839 in the form of Mechanics' Institutes, was certainly a priority. The need to create a bridge from primary schooling into more advanced forms of training was clearly a major factor in their establishment. At the same time, the nature of their curriculum, which included both "general culture" and technical training, revealed a broader focus in their aims and eventual development. In fact, the original technical and vocational aims of the schools receded in importance over the years, with students eschewing the industrial and agricultural courses they offered, while the university-preparatory curriculum came to be more and more in demand (Education Department of Victoria 1973: 437).

By 1912, this had led to the establishment of the first junior technical schools for boys (girls would wait until 1929 for their own technical schools), on the basis of the argument that the continuation schools neglected technical training and pursued a syllabus designed for University entrance, an argument put convincingly by Donald Clark, the first Chief Inspector of Junior Technical Schools (Education Department of Victoria 1973: 641)

Following this point, state secondary schools were largely freed from the need to provide vocational education and training and developed to perform a largely academic and highly selective function, one which was encouraged and aided by some democratisation of the demand for university entrance. Even so, their development remained restricted for many years to those geographical areas not served by the private schools: Melbourne's northern and western suburbs. In these same working-class areas, however, the expansion of the technical schools was

much more aggressive and their share of enrolments disproportionately high, compared with the high schools (Teese 1987).

It is evident that state authorities recognised the potential dangers in the development of this dual system from the earliest times. First, Director-General Frank Tate and, later, his replacement Martin Hansen were alarmed at the increasing narrowness of the curriculum in both divisions. To Hansen especially, the dual system was uneconomic and “anti-democratic” (Education Department of Victoria 1973: 489). However, his highly developed plan to merge the technical and secondary divisions of the Education Department in 1929 narrowly failed when the Conservative government was defeated in that year. The incoming Labour administration saw the proposed merger as an attack upon a technical school system designed specifically to address the needs of its working-class constituents. Bypassing Hansen, the Minister turned to the Chief Inspector of the Junior Technical Schools, Donald Clark, for advice. He was told that a separate system of technical training was needed to ensure that vocational training did not become marginalised and “neglected”, as it would within a system which valued the university-preparatory curriculum above all else (Education Department of Victoria 1973: 641). Clark, moreover, felt that the emphasis on a broad education, such as might be found in the high schools, neglected to address the serious “social and economic circumstances in those days” of the working class children whose families were suffering most from the global depression at the time (Education Department of Victoria 1973: 643). These arguments appealed to the new Labour government and the plans were duly put aside, the dual system witnessing no further serious challenge for another thirty years.

However, if Hansen found it difficult to merge the technical and high schools in 1921, Ramsay’s efforts to reform secondary schooling in 1960 were to prove just as fruitless. Commissioned to investigate, among other factors, the problem of “fitting pupils into the right courses” (Education Department of Victoria 1973: 540), this inquiry focused on the central issues of curriculum and structures for the delivery of post-primary education. In doing so, the authors of the Ramsay report mounted an argument that high schools should, in theory at least, be comprehensive. Yet the recommendations of the report discounted this same argument on the grounds that such a change would be too difficult to achieve and instead advised remaining with the status quo (Education Department of Victoria 1973: 542)

It was only in the 1980s and after the rest of the Australian states had finally disbanded their systems of technical schools that Victoria finally merged its technical and high schools into a unified system of comprehensive providers. But this formal unification did not remove the need for vocational options. Nor, as we shall see, did it result in uniformity of demand for these options across all schools or all sectors (state and private). When, in 1986, the technical schools were finally abolished, the continuing need for senior secondary curriculum options which catered for the more diverse population completing school became quickly apparent. The ensuing introduction of the Victorian Certificate of Education (VCE), on the advice of the Blackburn Committee, was an attempt to cater for this diversity under the umbrella of a single senior secondary qualification. Its success, however, was limited, with a perception that vocational options had been accorded little room

within its curriculum ambit. It is useful here to recall Clark's concerns expressed nearly a century ago regarding the difficulties in providing vocational studies within a unified system. His argument at the time was that the continuing lowly status of the vocational curriculum within a comprehensive system could only be overcome by the establishment of a separate system of provision, an argument which resulted in the establishment of the technical schools soon after the birth of the state high schools, and one which contributed to the tenacious survival of that system for many years after. To an extent these concerns had been justified then and were justified when the new secondary certificate was introduced in 1991. In fact, it was the paucity of vocational options within the newly-established credential which led to the subsequent development of dual-accredited subjects (both as VCE subjects and as accredited vocational studies) within the VCE in order to address this lacuna (Teese 2000; Kirby 2000). It is these reforms which formed the basis of the current system of vocational education and training programs in Victorian secondary schools.

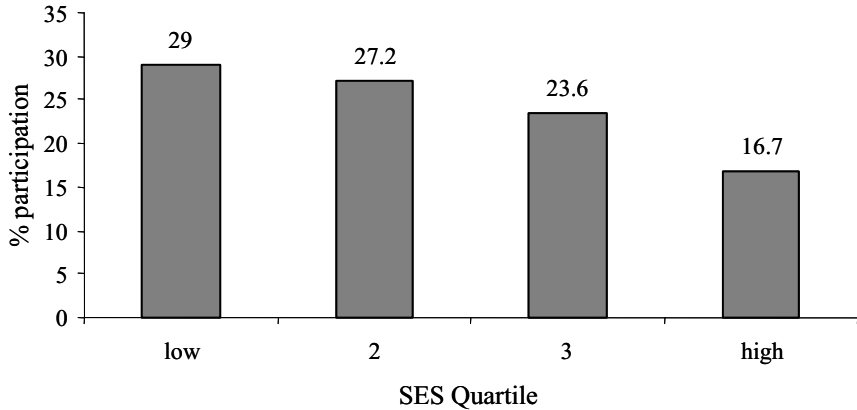
#### VET IN SCHOOLS PARTICIPATION AND OUTCOMES – 2005

Vocational studies are now playing an increasingly important role in catering for the diversity of users remaining in schools until the age of seventeen or eighteen, and largely within a framework of formally comprehensive schooling. But in reality, schools have been unequally exposed to these pressures and consequently the need to provide vocational alternatives to the academic curriculum has been stronger at some sites than others. Moreover, arguments as to whether vocational studies are best delivered within a segregated system, in which VET is valued, or in a comprehensive system, in order to reduce social segregation, have never been fully addressed.

If there was a hope that the comprehensive approach would eliminate social patterns of segregation, it would appear that recent studies do not support this view. Research in Australia and elsewhere confirms the socially segregated pattern of participation in VET programs in schools. In Australia, research by Teese and Polese (2003) found that the "space created in the curriculum for vocational learning has also become a source of social segregation" (Teese and Polese 2003: 208), with students in the bottom two quintiles of socioeconomic status more than twice as likely to enrol in vocational programs as students from the highest quintile. A recent survey of school completers in Victoria confirms that secondary school students from the poorest socio-economic status backgrounds are the group most likely to enrol in vocational education and training programs. This study made use of data collected as part of a destination survey of the 2004 cohort of school completers in the Australian state of Victoria during 2005. Each respondent was allocated a SEIFA (socioeconomic index for addresses) value based on their home address. Data were also collected on individuals' participation in vocational programs while at school.

Figure 6.1 allocates respondents to four quartiles of SEIFA values: the 25 per cent living at addresses with the lowest SEIFA, the 25 per cent living at addresses

with the next lowest SEIFA values, the 25 per cent living at addresses with the second highest SEIFA values, and the 25 per cent living at addresses with the highest SEIFA values. The bars report the proportion of respondents in each category participating in VET programs. This chart shows that those students living in the poorest locations are most likely to enrol in VET programs, while those living in the wealthiest areas are least likely to enrol in VET programs.



*Figure 6.1: Participation in Senior Secondary School Vocational Programs, Victoria, Australia, 2004, by SES*

Figure 6.2 examines the correlation between the average SEIFA values of each of Victoria's Labour Force Regions and the proportion of students enrolled in VET in each. Again, a strong correlation is evident in the configuration of the data, with VET participation tending to fall away as the mean SEIFA index value of socioeconomic status rises. Thus, we see that in the wealthy inner and eastern suburbs of Melbourne (Inner East and Inner Melbourne regions), approximately 14 in 100 Year 12 students participate in vocational programs, while double this proportion do so in the poorest outer suburban regions of the city (Mornington, North West and Outer West regions).

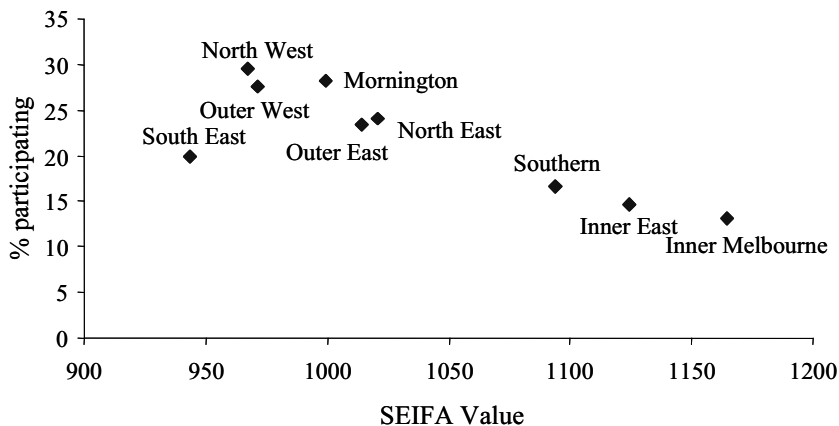


Figure 6.2: Mean Participation in Senior Secondary School Vocational Programs & Mean SEIFA Values of Metropolitan Regions, Victoria, Australia, 2004

These findings confirm that vocational programs in schools are most strongly colonised by the poorest families, and that this activity is concentrated in the schools serving those families. They confirm a view that the socially specific function of VET (that of preparing the children of the poorest families for direct entry to the labour market) has persisted over a period of 200 years and that this function is performed primarily in those schools in which these children are concentrated.

However, further shaping patterns of participation is the influence of the non-government schools. State schools, catering for the greatest diversity, display the highest rate of VET enrolments and the lowest socioeconomic profile. Catholic schools, which cater for a demographic still below the state average in terms of socioeconomic status, have a lower rate of VET participation. Independent schools combine the lowest sectoral rate of participation in VET with the highest mean socioeconomic status, far removed from the state average on both dimensions. Figure 6.3 shows the relationship between socioeconomic status and VET participation within each sector. The independent schools, which cater for a higher socio-economic status clientele, demonstrate lower levels of VET participation, but even within that sector, those students from higher SES backgrounds tend to be less likely to enrol in VET programs than those from lower SES backgrounds. This also holds true for the Catholic and state sectors.

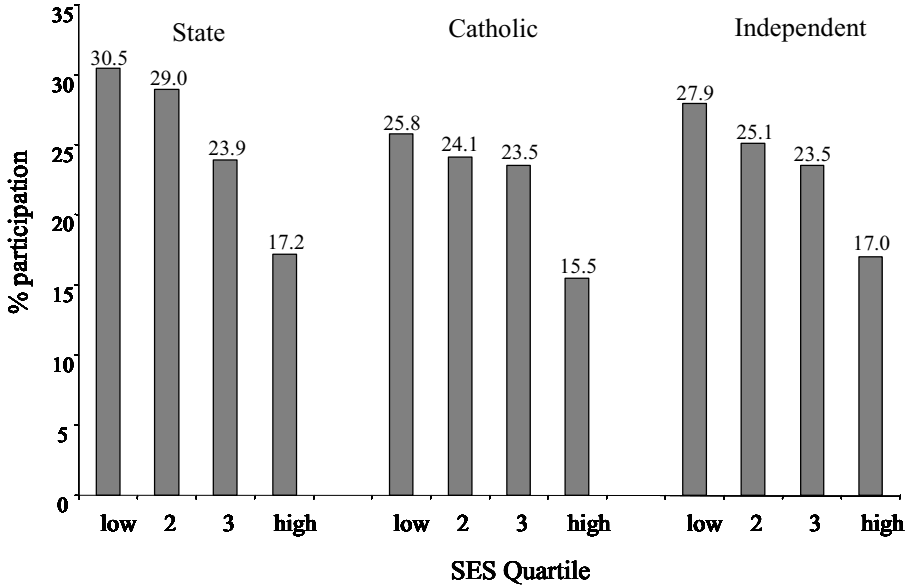


Figure 6.3: Participation in Senior Secondary School Vocational Programs, Victoria, Australia, by SES and School Sector, 2004

A final perspective on the role and worth of vocational programs in the modern Australian era may be found in outcome measures provided by another study conducted by the author and his colleagues in the Australian state of New South Wales (Polesel *et al.*, 2005). Estimates of post-school transition for vocational and non-vocational students in that state showed that VET in Schools graduates had a higher rate of transition into further education and training than the students exiting general, non-vocational programs, despite the latter group's higher achievement profile. This was largely due to the relatively higher rates of transition of vocational students into post-school vocational destinations, rather than university.

However, given the socioeconomic profile of the students who populate these vocational programs, this is a positive outcome, and helps to explain the recent strong growth in participation in such programs. We have already noted the difficulties of catering to a diverse clientele with a narrowly-based academic curriculum. Where schools in the past could channel "non-academic" students into the labour market and focus on the provision of a university-oriented senior secondary curriculum, the decline of the teenage labour market has put pressure on schools to cater for a growing diversity of students in the emerging mass system and has required a range of curriculum options to cater for the accompanying diversity of needs. Vocational programs play this role and with some success. Nevertheless they continue to be seen largely as an option for the weakest learners and struggle for unqualified support in the school environment.



A recent study conducted by the author and his colleagues (Polesel *et al.*, 2004) suggested that vocational studies remain undervalued and under-resourced in Australian schools. A number of strands of evidence emerged to support this proposition. These could be broadly categorised as curriculum-related (teachers' views of the place of vocational programs within the broader context of school curriculum provision) and resource-related (how schools allocate facilities, human resources and financial resources to vocational programs), although it can be argued that both may be traced to the cultural emphasis placed on vocational programs in schools.

Overall, the study acknowledged that considerable change had occurred in Australian schools with evidence of an increasing acknowledgement of the value of VET, but that there is continuing marginalisation of vocational programs, which are often seen as being outside the core of schools' main functions. Further undermining their acceptance, significant proportions of teachers regarded VET as incurring extra costs both for the students and for the school. These views were supported by interview data which showed that schools commonly charged students for participating in VET programs, either to cover the costs of delivery by an external provider or to recover the costs of materials or transport. VET was not seen as core business and therefore could not make legitimate claims on school resources. Its demands could not be considered in the same way as the demands of the English or mathematics departments, which occupy a culturally accepted and historically determined place at the centre of the school's mission. As a recent arrival, a curriculum add-on, VET is required to find resources "elsewhere", having no authoritative claim in its own right. It is ironic that those programs most likely to require additional subsidies from the students themselves are those most likely to be colonised by students whose economic circumstances make them least likely to be able to afford them.

## CONCLUSION

In Australia, the attempted mainstreaming of vocational programs in schools has met considerable resistance and a strong view in some settings that the role of schools should not include the vocational formation of young people, despite evidence that these programs achieve good outcomes for even the weakest learners. Continuing rigid distinctions between academic and vocational pathways, particularly where narrowly vocational competencies are delivered at the expense of broad generic competencies in the vocational stream, have done little to alleviate problems of social selection and the status of VET remains problematic (Hickox 1995; Halpin 1992; Edwards *et al.*, 1992). Moreover schools which offer vocational programs risk being perceived as lower status providers and consequently risk losing students (Keating and Lamb 2004). In some settings, the response has been to "gentrify" VET, introducing rigorously academic assessment regimes in a process identified by Goodson as "academic drift" (Goodson 1995), but accompanied by the risk of further alienating some student groups.

At the policy level, an issue which impacts heavily on the acceptance of VET is the relationship between the VET curriculum and the senior certificate. This issue

has been dealt with at length elsewhere (Teese and Polesel 2003) but the argument is founded on the fact that the status of VET is heavily dependent on the institutional value accorded to VET through recognition (or non-recognition) of VET subjects' contribution towards satisfying the requirements of the senior certificate and the calculation of a tertiary entrance rank. Institutional barriers preventing students from completing sufficient VET modules to be awarded a VET qualification, timetable barriers, devaluing VET by allowing participation without competency assessment and lack of access in some states to VET programs until the final two years of schooling have all further eroded the emerging status of VET programs in Australian schools.

It remains the fact that more than half of all students who complete school in Australia do not go to university (ABS 1999). This proportion rises to 60 per cent if we consider the entire secondary school cohort. Yet, a number of recent Australian studies have suggested that many students completing school are unhappy with the quality and the amount of advice they are given regarding non-university post-schooling options (Polesel *et al.*, 2004). While students are generally happy with the advice they receive regarding university courses, they are much less likely to report that advice regarding vocational education and training and employment options is helpful or even available. Data from these studies suggest that schools need to consider carefully the quality of the advice they provide school leavers. They also suggest that young people feel the need for a more balanced treatment of their post-schooling options, one which includes advice about employment and training. The message for schools today is that, while information about university courses is important, students need more. These findings suggest that schools continue to organise programs and the allocation of resources around the needs of the minority who enter university, and that these problems are the product of an entrenched school culture which valorises the academic curriculum above all else.

The findings presented in this paper suggest that historical suspicion of secondary schools as indifferent or hostile to the successful provision of vocational programs remains well-founded. In this context, it seems that only the economic threat of skills shortages has brought out politicians and policy makers in favour of increased VET provision in schools. The findings also suggest that social segregation remains a reality even within the formally comprehensive system of secondary school provision in Victoria, with a division of labour along SES lines evident both between and within the schooling sectors.

Whether vocational programs can outgrow their cultural beginnings in this climate is unlikely. In order to play a more socially inclusive role, one which provides real opportunities for all young people rather than a relegation pathway for the most economically disadvantaged, vocational programs must be given equal status and some element of prestige in modern secondary schools. As long as they are required to compete on unequal terms for scarce resources in a cultural climate which still harks back to the classical model of the secondary school first established in the early 19<sup>th</sup> century, these programs will struggle to find acceptance and will be ill-equipped to cater for the emerging needs of a knowledge-based society.

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## Reducing Inequality in an Age of Student Mobility

### Challenges Facing American Higher Education

*Sara Goldrick-Rab*

#### INTRODUCTION

The massive expansion of American postsecondary education was among the most successful public policy achievements of the twentieth century. As the proportion of students finishing high school grew, rates of college-going rose as well. On average, the per cent of students enrolling in college during the fall immediately following high school graduation increased from 49 per cent in 1972 to 67 per cent in 2004. Thus, the transition from high school to college is now a normative one for the majority of students who complete their secondary education. However, the postsecondary transition rate is substantially lower for students from the bottom 20 per cent of family incomes (50 per cent), and for African-American and Hispanic students (63 per cent and 62 per cent respectively). Those same students are also less likely to complete high school and in the U.S. it is very uncommon for non-graduates to go on to college (U.S. Department of Education 2006: Table 29).

The economic return on the bachelor's degree (B.A.) continues to grow, rendering it a nearly essential requirement for adults wishing to join or remain part of the middle class. Men with a college degree earn nearly 50 per cent more than men with only a high school diploma, while college-educated women earn nearly 60 per cent more than their less-educated counterparts (Ellwood and Kane 2000). The average annual family income for families headed by an adult with a bachelor's degree has increased 17 per cent since 1973, and now hovers around \$100,000 (Mortenson 2006). Further, a student's probability of attending a four-year college is much greater if at least one of her parents completed four years of college. Eighty-six per cent of high school graduates with a parent who finished a bachelor's degree go on to attend college, compared to 67 per cent of those whose parent started but did not finish a college degree, and 55 per cent of those whose parent is a high school graduate (Ellwood and Kane 2000: U.S. Department of Education 2006: Table 29). Clearly, the benefits of earning the highest undergraduate credential offered in the American system are transmitted to the children of graduates only if one completes a degree.

But the United States has been far less successful in promoting degree completion among students who enrol at its colleges and universities than it has

been at promoting access. Only 34 per cent of students who start college at a four-year institution complete a bachelor's degree within four years, 64 per cent finish within six years, and 69 per cent complete within 8.5 years (Adelman 2006). Strikingly, since 1945 as the proportion of adults in each subsequent age cohort enrolling in college has increased, bachelor's degree completion rates have decreased (Turner 2004).<sup>66</sup> Clearly, going to college does not equate with finishing college in America.

Moreover, there is a persistent socioeconomic gap in college completion. As a result of three points of inequity in American education – high school graduation, college participation, and college completion – students from the highest socioeconomic status quartile are nearly nine times more likely to graduate from college than those in the bottom quartile (National Center for Education Statistics 2005).<sup>67</sup> While on average 23.8 per cent of the U.S. population aged 15 and older has a bachelor's degree, that degree is held by only 14.4 per cent of African-Americans and 9.6 per cent of Hispanics (U.S. Census Bureau 2004). The implications of this disparity are deeply troubling, for as economist Sarah E. Turner notes, "It is these differences in attainment, not in enrolment, that ultimately affect the distribution of earnings" (2004: 15).

One understudied but important facet of the American higher education system contributing to these stratified outcomes is the level of institutional mobility among its students. Over the period during which student mobility has been tracked, the number of schools attended by college students has slowly but steadily increased. In 1972, 47.5 per cent of college students attended more than one college, by 1982 it was 51.3 per cent, and in 1992 it was 56.5 per cent. In fact, nearly one-fifth (18.9 per cent) of 1992 high school seniors went on to attend more than two colleges (Adelman 2003; Adelman 2004a).<sup>68</sup>

But the current policies and practices of U.S. higher education do not facilitate the equitable flow of all students among all schools. Some students who change schools lose a portion of the credits they earned the last institution they attended, fail to piece together a coherent curriculum of courses, and struggle to find the means with which to pay for college and travel to school (Bailey 2003; McCormick 2003; Prager 2001). Moreover, studies of student mobility in elementary and secondary education in the U.S. indicate that mobile students have difficulty coping with moves to new schools, often suffering psychologically, socially and academically (Rumberger 2003). For all of these reasons, then, we can expect increases in student mobility in higher education to contribute to the declines in overall completion rates. Furthermore, given that the problems caused by mobility are probably more common among students with less access to the information required to effectively

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66 College enrolment here includes enrolment at any type of college, not limited to four-year colleges and universities (Turner 2004).

67 In this paper a student's socioeconomic status refers to a composite measure based on parental education, income and occupation; the measure was developed by the National Center for Education Statistics and is widely used in its reporting. Other measures of social class background are also used in analyses referenced, including a measure of parental occupation (see footnote 8) and parental education.

68 Here, attendance includes enrolment at all types of colleges.

navigate institutional structures (e.g. low-income or first-generation students), we can also expect that student mobility will contribute to the socioeconomic gap in college completion.

Students move among colleges in a tremendously varied fashion. Multi-institutional attendance can take many forms beyond what is most commonly known as transfer, including what some observers term “swirling”, a pattern of movement back and forth between two- and four-year institutions, “excursion” to temporary institutions, and “serial transfer” or “migration” from one institution to another in sequence (Adelman 2004b; Borden 2004; de los Santos and Wright 1990; McCormick 2003). In this chapter I discuss how student mobility, in all of its forms, shapes inequality in American higher education. In particular, I summarise findings from my research which document the stratification of student mobility using national longitudinal transcript data. Based on the findings from those analyses, I contend that contemporary approaches to closing gaps in college completion are flawed to the extent that they do not recognise student mobility and attempt to improve its outcomes. Instead, I offer some proposed approaches to improving completion rates which are more responsive to the inequalities inherent in student mobility.

#### INCREASING THE STOCK OF COLLEGE-EDUCATED LABOUR

While higher education researchers and practitioners have long been concerned with the relatively low completion rates produced by the majority of American colleges and universities, and the socioeconomic gaps in those rates, they have only recently been termed a public concern by state and federal policymakers. Motivated by fiscal constraints, the globalisation of the economy, and an intense accountability environment, a movement is underway to increase the ‘success rates’ in higher education.<sup>69</sup> In 2005, this attention was magnified by the creation of a new federal commission on higher education, which has taken colleges and universities to task for their low completion rates and (to some degree) inequities in those rates (Field 2005). Among the most prominent voices in that debate are those who believe that these inequities are caused or exacerbated by institutions, and therefore institutions need to stop ‘shying away’ from being held accountable for making changes (Haycock 2004). For example, The Education Trust, a prominent Washington D.C. based educational policy organisation, has created a website highlighting the differences in graduation rates between schools with “similar” groups of students, enabling consumers of higher education to compare institutional graduation rates.<sup>70</sup>

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69 “Success” is most often defined in terms of graduation rates. Institutional six year graduation rates in the U.S. range from less than 10 per cent to nearly 100 per cent, with an average of 53 per cent (Carey 2004)

70 “Similar” colleges are determined based solely on 11 factors, including racial composition, percent of students receiving Pell grants, and median SAT scores. The Trust acknowledges that institutions’ “outbound transfer rates” are not included due to a lack of data, and thus institutions who lose or facilitate the movement of students away from their campus are penalised with lower graduation rates (see “About the Data” at the College Results Online website).

Using “College Results Online” ([www.collegeresults.org](http://www.collegeresults.org)), one will find that “a typical analysis comparing one university to the 25 most similar institutions produces a range (Carey 2004: 3) between the highest and lowest graduation rates of 30 percentage points or more”.<sup>71</sup> According to The Education Trust, since there is evidence that some institutions are doing a better job than others in serving similar groups of students, the solution to inequitable graduation rates is hold schools accountable for achieving equitable outcomes, so that they will embrace the possibility of improving (Carey 2004a). The theory goes that market forces, via accountability, will in turn act to shame institutions into action.

But this focus on improving institutional graduation rates has an adverse side effect to the extent that it serves to reinforce the sense among colleges and universities that students ‘belong’ to them and are best kept within their schools until completion. By promoting a culture of ‘responsibility,’ this approach encourages institutions to focus more on their own ‘successes’ than those of their students. Furthermore, institutional comparisons and studies of ‘best practices’ push the policy agenda towards tinkering with ‘institutional effects’ in the hopes of changing student outcomes. A veritable cottage industry of higher education researchers has struggled mightily to identify such institutional effects, but thus far they have met with relatively little success (Pascarella and Terenzini 2005). This is in many ways unsurprising. Several decades of K-12 research since the Coleman Report have failed to yield compelling evidence that the measurable dimensions of institutional quality (such as school or classroom size, and teacher quality) have effects on student outcomes substantial enough to increase or decrease educational attainment or to close gaps in attainment (Hanushek 2003). Moreover, there is an inherent difficulty in isolating the effects of individual institutions when students are moving among schools. As Clifford Adelman notes, even using a weighted scheme (such as that employed by Titus (2004)) “for a student who earned 26 credits at a community college, 30 credits at a four-year baccalaureate residential college, and 75 credits at an urban university would dilute the very meaning, let alone effect of any single institutional characteristic” (2006: 82). While new empirical methods, such as cross-classified multi-level modelling,<sup>72</sup> might be used to improve the estimates of institutional effects, such methods usually fail to account for the unequal routes students take in college.

As the options for how students can pursue higher education in America increase, students respond by participating in the tertiary sector in myriad and complicated ways. And yet, just like the gaps in completion rates, student mobility is still treated “as if it (were) late-breaking news” (Borden 2004: 13). Institutions themselves encourage student mobility by making it easier to enrol whenever and wherever a student chooses; for example, witness the growth of mid-semester

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71 The tool created by The Education Trust is flawed beyond the definition of ‘similarity’ between student bodies. The data used to examine gaps in completion rates come from only two cohorts of students (who entered college in Fall 1996 and Fall 1997), and therefore the results are probably sensitive to unobserved fluctuations.

72 A tool suggested by Paul Umbach, drawing on the work on Steven Raudenbush and Anthony Bryk (2002), when speaking at the 2006 meetings of the Association for Institutional Research.



enrolment, distance learning and evening classes. Indeed, some schools, particularly those in metropolitan areas, actively seek out students who might be willing to transfer to their institutions, often resuming college after a break. For example, the progressive New School University placed an ad in the *New York Times* which read: “Start. Stop. Start. Stop. Start. Finish Your BA at the New School.” At the same time, students are acting under increasingly severe fiscal constraints, as tuition and the cost of room and board at even the least expensive institutions has skyrocketed (Heller 2002). Thus, while it is true that the majority of today’s bachelor’s degrees recipients earn their degree from the first institution they attend (Adelman 2004a), we can expect to continue to see more students, especially those who do not earn degrees, attending multiple schools.<sup>73</sup> As a result, the gaps in completion rates are likely to grow, with more socioeconomically advantaged students remaining at the first school they attend, and the more disadvantaged students travelling other paths among institutions, losing course credits along the way. Since student mobility may also compromise curricular coherence, the result of these changes may be even more severe, as the very learning gains said to take place in college may themselves be differentiated by not only social class lines, but also by mobility lines (Prager 2001).

#### EMPIRICAL ANALYSES OF STRATIFICATION IN STUDENT MOBILITY

What most policymakers and practitioners in higher education fail to recognise is that student mobility in American higher education is an unequal process with unequal outcomes. I have investigated this form of stratification in several studies, including ‘Following Their Every Move’ (Goldrick-Rab 2006a), ‘Pushed into Jumping’ (Goldrick-Rab 2006b), ‘Does How You Go Matter?’ (Goldrick-Rab and Pfeffer 2006), and ‘Getting Off Track’ (Goldrick-Rab 2006c). In this work I compare the various types of student mobility patterns we observe in American higher education to the socioeconomic backgrounds of students engaged in those patterns. My findings are essentially threefold. First, there is significant social class variation in student mobility. Second, the type of mobility in which the poorest students engage is associated with a strong negative penalty for bachelor’s degree completion. And third, both ascriptive and achieved student characteristics contribute to stratified mobility patterns, thus we might say that student mobility is a process resulting from being pushed into jumping into advantageous and disadvantageous routes through college. Next, I discuss each of those findings in more detail.

In all of these analyses I draw on data from the National Educational Longitudinal Study (NELS), an American survey that sampled 25,000 8th graders in

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73 Clifford Adelman finds that among mobile students who earned bachelor’s degrees, the per cent earning that degree from the first institution they attend varies by the type of attendance pattern they follow. For example, while 58 per cent of students who engaged in lateral transfer among four-year schools got their degree from their first school, only 30.3 per cent of student engaged in movement alternating between two and four-year schools did so (2006: 64). Note that this statistic does not tell us whether movement resulted in a return to the first institution a student attended.

schools across the country in 1988, and tracked them until they were 26 or 27 years old in the year 2000. The NELS is a rich dataset containing both students' high school and college transcripts, which provide a detailed account of the places and times where students went to school, even if they went to multiple institutions. Because the NELS follows students across schools, it differs from institutional datasets, which often lose track of a student when she or he leaves their school. Further, the wealth of information on NELS students prior to college entry allows the researcher to distinguish between the independent influences of family background, high school achievement and college attendance patterns on chances for degree completion.

### *Unequal Opportunities for Student Mobility*

Overall, there is a substantial amount of mobility among the college students in the NELS dataset. As noted earlier, more than half (56.5 per cent) of the students in the full sample attended more than one college. That statistic is the one most often referenced in describing student mobility in higher education. But that number conceals several important sources of variation in the way in which students move across schools. First, there is variation in the meaning of mobility by institutional type: the importance of student mobility is different for students who start at a four-year institution, as compared to students who begin at two-year institutions. Two-year institutions in the United States are intended to provide a 'transfer function', a route to a bachelor's degree that begins at a two-year school and ends at a four-year one (Brint and Karabel 1989; Dougherty 1994). Thus, mobility is expected behaviour among two-year students; moving to a four-year institution is a positive and therefore promoted outcome. However, it is not a normative move; indeed, only 29 per cent of beginning college students who start at a two-year institution transfer to a four-year school within six years (Hoachlander, Sikora & Horn 2003). This relatively low percentage is due to many factors, including the lower levels of academic preparation among the student body, the difficulties in navigating the transfer process, and importantly, the fact that not all students at two-year institutions aspire to transfer (Brint and Karabel 1989; Dougherty 1994). Therefore it is important to look at mobility *within* these subpopulations of students, defined by the type of institution they first attend. My research thus far has examined mobility among four-year students; 46 per cent of NELS students beginning at four-year institutions attended more than one school (Goldrick-Rab 2006a).

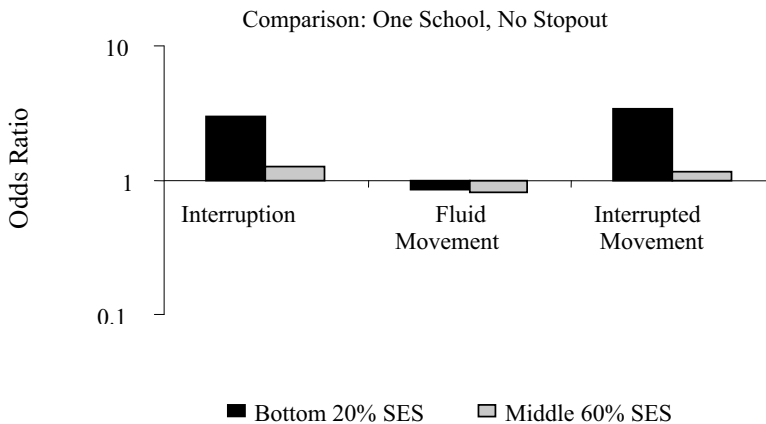
A second source of variation in student mobility lies in the nature of the mobility patterns: quite often institutional change is not the only 'non-traditional' behaviour students engage in. Changing colleges is a process that sometimes involves a physical move to a new location, a change in financial aid status, and/or a transfer of credits.<sup>74</sup> Thus, it is a process that may also involve an interruption in enrolment. I tested this hypothesis by testing whether multi-institutional attendance intersects with discontinuities in enrolment (so-called "stopouts") in significant ways. Of the

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74 Of the 1992 high school seniors who attended more than one college before the year 2000, 35.7 per cent attend college in more than one state (Adelman 2006).

2,135 NELS students who started their postsecondary education at a four-year institution and went on to attend at least one other college, 20 per cent also experienced an interruption in their enrolment. I term this pattern “interrupted movement,” and compare it to “fluid movement” across schools (Goldrick-Rab 2006a).

The students who engaged in ‘interrupted movement’ across schools are significantly different from those engaged in ‘fluid movement.’ They are more often male, non-white, and from the bottom 20 per cent of the socioeconomic distribution, and they have lower high school test scores, lower high school grade point averages, and engaged in less rigorous high school curricula. The results of a multivariate model, controlling for the effects of these other characteristics, reveal that the relationship between a student’s family socioeconomic status and their propensity for ‘interrupted movement’ is significant, such that students from the bottom 20 per cent of the socioeconomic distribution are more than three times more likely to engage in that pattern, compared to students in the top 20 per cent (see Figure 7.1 and Goldrick-Rab 2006a).



*Figure 7.1: Effects of Socioeconomic Background on Log Odds of Student Mobility*

Notes: Odds are from a multinomial logistic regression and are net of gender, race, high school achievement (test scores, GPA, curriculum), and degree expectations. Sample includes students beginning at four-year institutions only. The top 20 per cent of the SES distribution is the comparison group. For more details, including full regressions, see Goldrick-Rab 2006a.

In other words, a student's ability to change institutions without having to take time off appears to be predicated, in part, on coming from a more advantaged family background. This may be due to the increasing reliance of many students on financial aid, which is administered indirectly via institutions (Heller 2002). When a student changes schools it often takes time to fill out the necessary paperwork required to resume aid receipt at the new school.<sup>75</sup>

The third source of variation in student mobility is based on the destinations students reach after changing schools. In his careful examination of the postsecondary transcripts of 1992 high school seniors who went to college, U.S. Department of Education analyst Clifford Adelman identified ten different combinations of origins and destinations among students who changed colleges (2006). The most common form of mobility is lateral movement among four-year institutions only (38 per cent of all college-goers engage in this type of movement), followed by: lateral movement among two-year institutions only (27 per cent); the classic two-year to four-year transfer (11 per cent); and alternating movement among two- and four-year institutions (7 per cent). Other patterns include 'incidental' attendance (often during the summer), and enrolment at trade schools.

In my own examination of NELS students who began at a four-year institution, 64 per cent of those students who changed schools moved laterally, from one four-year school to another; the other 36 per cent did a 'reverse transfer' to a two-year institution. I found that these two forms of movement are differentiated by a student's socioeconomic background, such that working-class students are overrepresented among those who engage in reverse transfer.<sup>76</sup> Moreover, net of other ascriptive characteristics and high school background, the odds of reverse transfer are 35 per cent higher for first-generation students compared to students with college-educated parents (Goldrick-Rab 2006b). Put another way, even among the relatively elite group of students who begin their tertiary education at a four-year institution, students whose parents did not attend college are disproportionately likely to leave that institution for a two-year school. As I discuss in the next section, this contributes to the lower levels of bachelor's degree completion among first-generation students.

### *The Stratified Outcomes of Student Mobility*

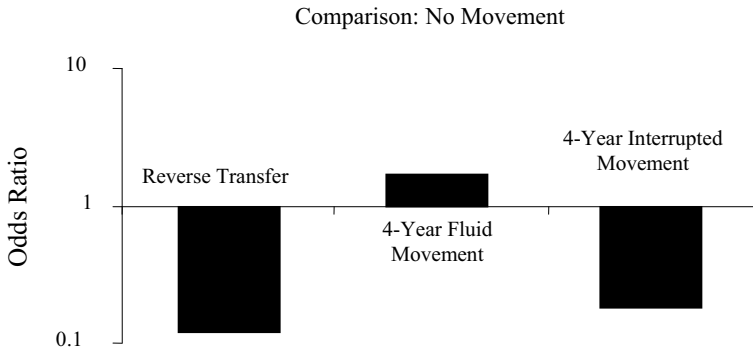
As Figure 7.2 illustrates, differences in the destinations of mobile students are not benign; instead they result in highly disparate outcomes in terms of degree completion. Students who move to a two-year institution greatly reduce their chances for completing a bachelor's degree, largely because most two-year

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<sup>75</sup> I am currently investigating the hypothesis that financial aid receipt or loss is associated with discontinuities in enrolment among mobile students.

<sup>76</sup> Class status was based on the parental occupation of the father, in the base year of the survey, when the student was in 8th grade. The professional class includes professionals, managers, and self-employed workers; the working class includes skilled workers, clerical and sales workers, and unskilled workers and farmers. This classification takes into consideration the standard international classification known as the Erikson, Goldthorpe and Portocarero occupational class categories (Erikson and Goldthorpe, 1992).

institutions do not grant four-year degrees. As a result, the odds of completing a BA are reduced by 88 per cent if a student does a reverse transfer, net of other determinants of completion including: demographic characteristics, high school achievement, degree expectations, selectivity and control of the initial institution attended, timing of college entry, enrolment intensity, and college GPA (Goldrick-Rab 2006b).



*Figure 7.2: Effects of Student Mobility Patterns on Log Odds of Bachelor's Degree Completion*

Notes: Odds are from a logistic regression and are net of gender, race, high school achievement (test scores, GPA, curriculum), degree expectations, selectivity and control of 1st institution attended, timing of college entry, enrolment intensity, and college GPA. Sample includes students beginning at four-year institutions only. Dependent variable is completion of a BA by age 26/27. For more details, including full regressions, see Goldrick-Rab 2006b.

Furthermore, each institutional change a student makes during college exerts a statistically significant negative impact on his or her chances for bachelor's degree completion. Changing institutions between the first and second years of college enrolment reduces the odds of completing a degree by 49 percent; a change between years two and three reduces completion by 73 percent, and a change between years three and four reduces the odds of completion by 60 per cent (Goldrick-Rab and Pfeffer 2006). These effects are above and beyond the negative impact of taking time off between any of those years of enrolment, and are also net of a student's college grade point average. Moreover, there is a significant interaction effect between parental education and institutional change, such that first-generation students incur a greater penalty for their mobility. As Figures 7.3 and 7.4 illustrate, this effect holds for students at both the bottom and top of the distributions of high school achievement.

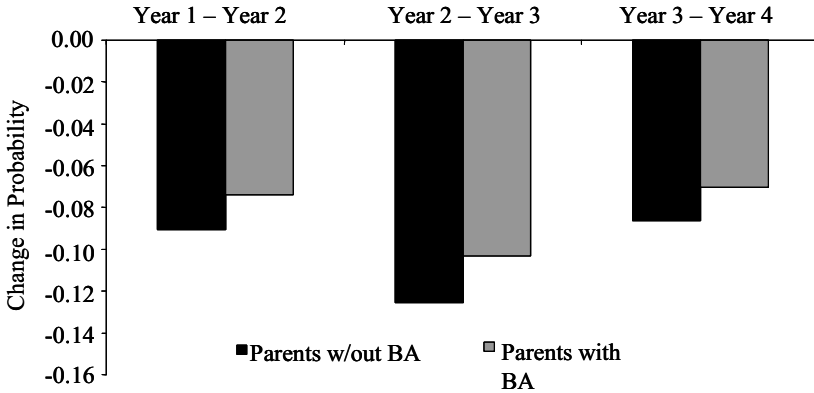


Figure 7.3: Effect of College change on the Predicted Probability of bachelor's Degree Completion (Highest HS GPA Quintile, all Other Variables at Their Mean)

Notes: Predicted probabilities generated from a logistic regression and are net of gender, race, high school achievement (test scores, GPA, curriculum), timing of college entry, periods of stopout during college, and college GPA. Sample includes students beginning at four-year institutions only. Dependent variable is completion of a BA by age 26/27. For more details, including full regressions, see Goldrick-Rab and Pfeffer 2006.

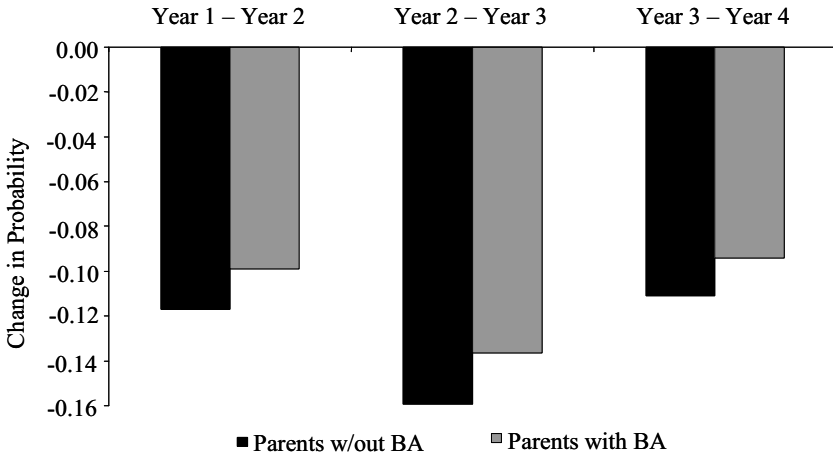


Figure 7.4: Effect of College Change on the Predicted Probability of Bachelor's Degree Completion (Lowest HS GPA quintile, all other variables at their mean)

Notes: Predicted probabilities generated from a logistic regression and are net of gender, race, high school achievement (test scores, GPA, curriculum), timing of college entry, periods of stopout during college, and college GPA. Sample includes students beginning at four-year institutions only. Dependent variable is completion of a BA by age 26/27. For more details, including full regressions, see Goldrick-Rab and Pfeffer 2006.

*Being Pushed Into Moving?*

If changing schools appears to reduce a student's chances for earning a degree, why do they do it? Does the decision appear to be a 'choice' based on an assessment of past and present academic performance, or is it the result of economic and social constraints? In order to examine the importance of these structural 'pushes' I compared the role of student's ascriptive and achieved characteristics in predicting student mobility. My analysis revealed that while family background is a significant predictor of a student's attendance pattern, high school achievement is of greater importance. The standardised effect sizes for various measures of high school achievement range from 0.96 to 1.22, while the effects of parental education, occupation and income range from 0.75 to 1.13. Thus it appears that student mobility is a structured process, but one that also varies based on how students respond to their academic abilities. Poor students may be more likely to follow disadvantageous pathways, then, partly because they have less money and less information, but also because they had lower grades in both high school and college (Goldrick-Rab 2006b).<sup>77</sup>

American postsecondary education also appears to disadvantage poor students because it is seemingly by its very nature, a path-dependent process. As Figure 7.5 illustrates, students who successfully complete their first year of enrolment are more likely than those who do not to go on to a second successful year. In other words, when we define completion at the end of an academic year as still being enrolled and having completed 30 credits (thus making progress towards a bachelor's degree), and persistence as still being enrolled but not achieving that credit threshold, it becomes clear that success begets success (witness the large amount of movement among the horizontal axes in the figure). Poor students are less likely to experience success in college early on. As a result, they quickly end up off-track, changing schools or taking time off, and in the end have lower completion rates (Goldrick-Rab 2006c).

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<sup>77</sup> The lower grades earned by poor students in both high school and college should not be entirely attributed to the individual, as the circumstances under which learning occurs have an impact on the grades students achieve.

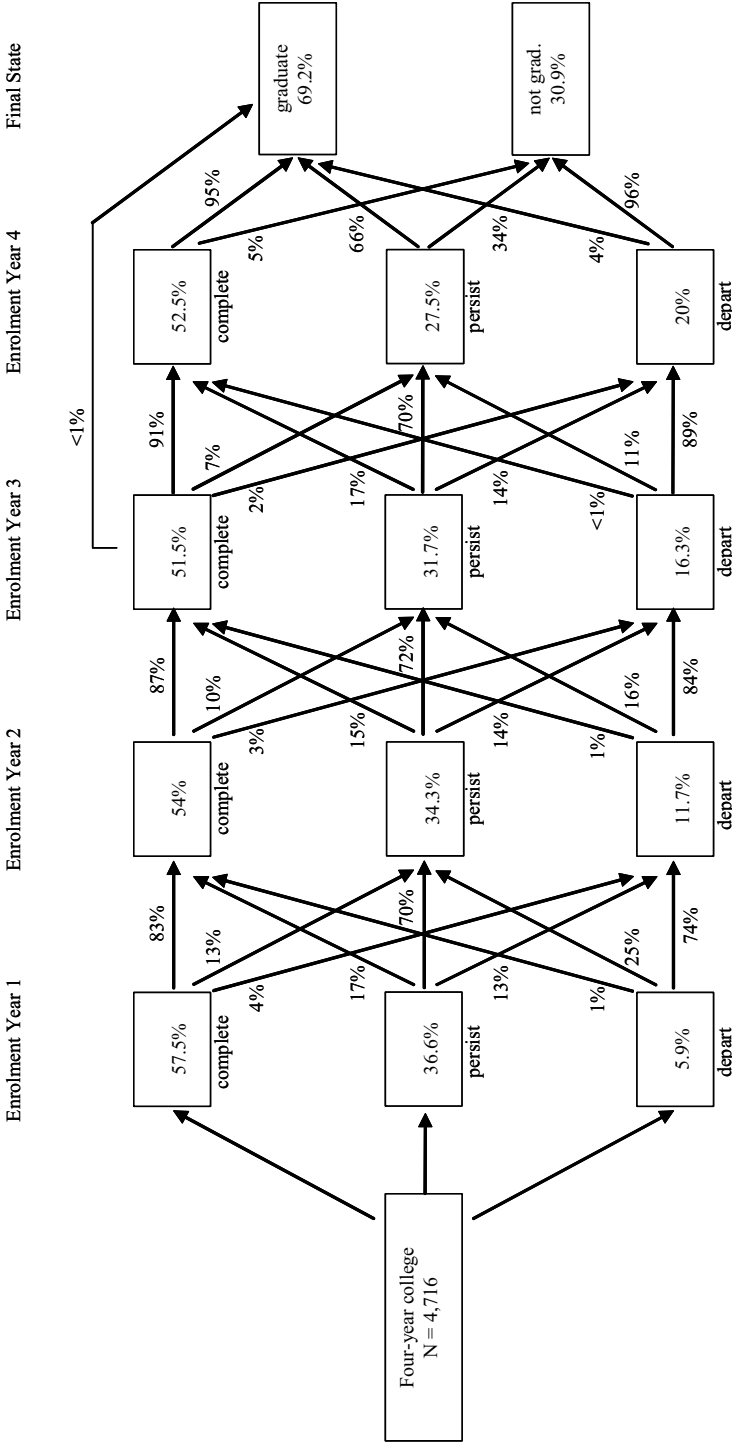


Figure 7.5: Flowchart of Path-dependence in Postsecondary Enrollment

Note: "Complete" indicates that the student is still enrolled and has achieved a credit threshold (30, 60, 90, 120) for a given year of enrollment. "Persist" indicates that a student is still enrolled but did not achieve a credit threshold. "Depart" indicates a student is no longer enrolled. See Goldrick-Rab 2006c for details.



## IMPLICATIONS FOR POLICY AND PRACTICE

The results of my research on student mobility strongly indicate that students are interacting with numerous institutions during their process of postsecondary education in inequitable ways. In one sense, it is not surprising that student mobility differentiates educational outcomes in American higher education. As Yossi Shavit, Richard Arum and Adam Gamoran's (forthcoming) cross-national examination of higher education in 15 countries reveals, the expansion of educational opportunity has nearly always been accompanied by increased differentiation within the higher education system.<sup>78</sup> Certainly, what Arum and his colleagues mean by the term differentiation is in fact institutional differentiation, or the diversification of the system into varied types of colleges and universities, whereas I am referring to increased differentiation in how students move through the system. But both meanings are consistent with the theory of Maximally Maintained Inequality (Raftery and Hout 1993), which holds that advantaged groups will take (better) advantage of any new opportunities created under conditions of expansion, and thus ensure the persistence or growth of class inequality. Thus, we might expect that the creation of additional options for student enrolment would result in more disadvantaged students following less advantageous pathways. On the other hand, it could also be true that student mobility represents an improved option for disadvantaged students; after all, it is plausibly a by-product of the movement of diverse students into higher education. If the opportunity for mobility helps to increase the overall amount of college poor students experience, even if it lowers their chances for degree completion, the net effect may well be positive.<sup>79</sup>

Is increasing opportunities for student mobility an effort to divert certain groups of students from increasing their educational attainment (a corollary of the hypothesis put forth by Brint and Karabel (1989) with regard to the creation of community colleges)? It would be premature to make such a claim without deeper knowledge about the sources of student mobility and the institutional and other factors which may serve to enhance it. How do low-income and first-generation students think about the choices they face when choosing how to enrol in college? How do they view their options when things fail to work out at the first school they attend? Do they accurately assess the potential risks of changing institutions? These questions are left for future research.

Even without knowing all the sources of student mobility, what is clear is that the inequitable ways in which students move among schools challenge our efforts to improve national graduation rates via a focus on individual institutions and their practices. Indeed, such a focus seems to reinforce the no-longer normative sense that students are best 'kept' in one school, their movement prevented. Instead, as Borden (2004) suggests, we should consider ways to facilitate productive mobility, altering the conditions under which students are changing schools. As an alternative to

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78 Although Shavit and his colleagues do surprise us with the finding that increased institutional differentiation does not always translate into increased inequality.

79 This is consistent with Shavit's (forthcoming) argument that institutional differentiation on the whole has increased opportunities and resulted in further democratisation of higher education, rather than diversion.

focusing on institutional graduation rates as the primary measure of success, we should be concerned with whether students complete college anywhere in the system, and whether they gain a coherent and deep postsecondary education. Yes, institutions should be held accountable for the education they provide our students, but their approach to achieving that goal need not be narrow or institutionally focused. We might consider redefining student success in terms of learning outcomes or competencies, and award schools partial credit for contributing to the outcomes of mobile students. This notion is not so radical indeed, it is an idea that has been broached by Charles Miller and others on the federal Commission on the Future of Higher Education (Field 2006). But achieving this goal is far more difficult than embarrassing individual institutions into changing their policies and practices. It requires tackling one of the biggest barriers to successful student mobility: the lack of transparency throughout American higher education. Most U.S. institutions currently function primarily to serve and preserve themselves, struggling to keep students enrolled and paying tuition at their school, and as a result they do not always have a student's best interests in mind. There is often little positive action to encourage and facilitate student mobility for students enrolled at four-year institutions; instead the actions taken are largely negative, discouraging students from moving. Thus an overhaul of this system would require systematic and coherent efforts to create common learning goals and teaching practices, install effective transfer and articulation agreements, change the process of administering financial aid so that the money follows the students, and enhance advising efforts to provide more and better information to all students.

Shifting our goals would also require focusing on the strengths of the "system" of American higher education, rather than emphasising the strengths of individual institutions. But there is a powerful political argument being advanced by those who want to focus on holding schools themselves independently accountable for institutional change. In 'One Step from the Finish Line: Higher College Graduation Rates are Within our Reach', The Education Trust argues that not doing so "implicitly excuses whatever graduation-rate outcomes occur at the higher-poverty or less selective institutions" (Carey 2004b: 3). This clever argument thus frames the issue as either/or; either you are for focusing in changing institutional practices, or you are against achieving equitable outcomes. Consideration of alternative approaches is therefore limited, in the name of political correctness.

Student mobility also challenges us to think beyond typical educational policies, to the power of broader social policies. The meaning of student characteristics, and the meaning of student mobility in higher education, may be found in the highly conditional and selective nature of the postsecondary transition process in America. That wealthy students are more likely to finish college, no matter where they attend, tells us that at each and every stage of the game, poor students are relatively disadvantaged. Changing the practices of schools will not sufficiently change the factor that most disadvantages these students: the experience of living in poverty, at the bottom of the heap in a country where wealth is increasingly concentrated at the top. In order to change educational outcomes in a system where students are increasingly unattached to specific institutions, we must use both educational and

social policy levers, viewing the two as part and parcel of an effort focused on the same goal.

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## Equality and Policy Challenges Faced by China's Education

*Yufeng Liu and Veronica Volkoff*

### INTRODUCTION

China is a country of immense importance in global terms. It has the largest population of any country, representing a fifth of the earth's people and is the fourth largest country in area. Geographically and climatically highly diverse, it encompasses a tropical south-east with coastal plains and river deltas, a vast western region of mountains, plateaus and deserts, and the cold, almost sub-arctic areas of the north (NGS 2004). Culturally, China has one of the longest ongoing civilisations stretching continuously from well before the beginning of the Qin dynasty more than 2,200 years ago. Though Han Chinese comprise more than 90 per cent of China's population, there are numerous ethnic minority groups.

Since the late 1970s, when China commenced reforms to its economy, it has demonstrated impressive growth, transforming itself from a 'poor centrally planned economy to a lower-middle income emerging market economy' (World Bank 2006: 122). Over 25 years, it quadrupled its per capita Gross Domestic Product (GDP) (World Bank 2006), averaging a GDP growth rate of 9.4 per cent per year (UNDP 2005), consistently improved its Human Development Index (HDI) ranking to 85<sup>th</sup> among 177 nations (UNDP 2005a), made strong improvements in the life expectancy of its people and diminished significantly the overall number of people living in poverty (UNDP 2005). China's decentralisation, development of a market oriented economy and increasing integration into the world economy culminated with its entry into the World Trade Organisation (WTO) in late 2001.

Within the final quarter of the century that had seen the fall of the last Chinese emperor, civil, regional and world wars and almost thirty years of a tightly state- controlled economy, China has rapidly transformed itself to become a major world economic power and trading nation. It has been doubling its share of world trade around every five years and now supplies a third of the world's mobile phones, is the largest exporter of computer electronics and domestic appliances and accounts for around a fifth of the world's trade in clothing (UNDP 2005a). Such levels of trade are at the core of the interdependence that now binds many nations closely to China and their future prosperity to China's continued success.

## EQUITY IN THE CONTEXT OF DEVELOPMENT

As China's recent development has advanced, so have the disparities between regions, between urban and rural areas, between different population groups and between men and women (Li & Tsang 2003; Ngok & Kwong 2003; Tsang 2002; Tsang 2003; UNDP 2005; UNDP 2005a). While patterns of growth reduced gaps in the 1970s and 1980s, these widened again in the 1990s (World Bank 2006). For example, the 2002 income of the wealthiest 10 per cent of the population was almost ten times that of the poorest 10 per cent (UNDP 2005). Reflecting these changes, China's Gini index<sup>80</sup> has risen from 0.28 in 1981, to 0.38 in 1995, and to 0.45 in 2001 (World Bank 2006), ranking it alongside Cameroon and Uruguay in relation to equality of distribution of income and consumption (UNDP 2005a).

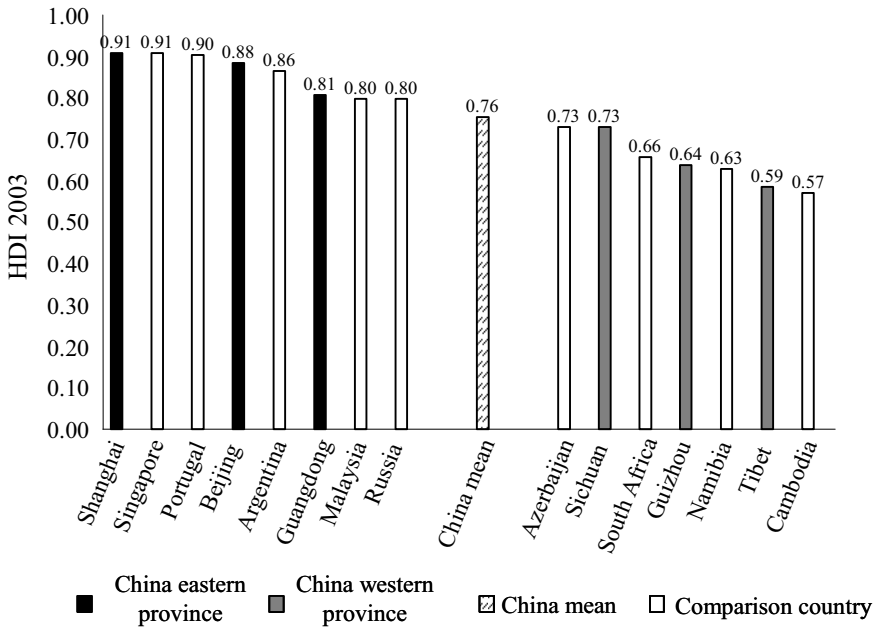


Figure 8.1: Human Development Index for Selected China Provinces and Comparison Countries, 2003

Source: Calculated on the basis of UNDP 2005 and UNDP 2005a, 2003 HDI data.

<sup>80</sup> The Gini index is a measure of the extent to which income/consumption deviates from a perfectly equal distribution. Values range from 0 which represents perfect equality, to 1.00 – perfect inequality.

In the eastern parts of China, Shanghai has an HDI higher than Singapore and Portugal, an OECD country. Beijing's HDI falls below Portugal's but ahead of Argentina's, and Guangdong province ranks ahead of Malaysia and Russia. Towards the central west of the country, the province of Sichuan with an HDI close to China's mean ranks just below Azerbaijan, while its southern neighbour province of Guizhou has an HDI that is barely higher than that of Namibia. Tibet, with the lowest HDI in China, ranks just above Cambodia.

In addition to disparities between east and west and urban and rural areas, gender divisions also exist within China's labour market: women are less likely than men to be in white collar work, they are more likely to be affected by layoffs in urban employment, and wage differences by gender are reported to be growing within the context of continuing economic reforms (UNDP 2005). Across the whole of China, women are 2.6 times more likely to be illiterate than men, but when home province is also considered, stronger differences are evident: women in poorly developed provinces are more than 8 times more likely to be illiterate than men in wealthy provinces (UNDP 2005).

### STRESS FACTORS IMPINGING ON EDUCATION EQUITY

The development of China's market-oriented economy, and its increasing integration with the global market, have prompted a reassessment of the nature, function and role of education and a new perception of education has emerged (Ngok & Kwong 2003). The financing of China's education system has undergone a fundamental structural change since the early 1980s, from a centralised system with a narrow revenue base to a decentralised system with a diversified revenue base (Tsang 2002). As a result, a common arrangement within counties, based on the principle of 'local responsibility and administration by levels' involves villages being responsible for primary education, townships for lower secondary education and county governments for upper secondary education. For cities, this arrangement is different: districts tend to be responsible for primary education and city governments for secondary education. Reforms in the financing of schools that have decentralised financial responsibility and diversified resourcing have been an important contributing factor to creating disparities and forcing schools to raise their own funds through fees (Tsang 2003).

While this resource diversification has broadened the base for government education funding and provided more non-government resources at the school level, it has created financial difficulties for education in poor and rural areas where there are inadequate resources for payment of teachers, building and maintenance of school facilities, purchase of up-to-date equipment and provision of teaching and learning materials.

China's government investment in public education is rather low by international standards, only about 3.4 per cent of GDP in 2002 (UNDP 2005). It has also been declining: more than 75 per cent of educational funding came from government in 1980 but by 2000, the proportion had dropped to only 54 per cent (UNDP 2005). Further, there are large disparities in government spending on education between

urban and rural areas, with rural counties only receiving about one third the per-student educational funding of municipal districts (UNDP 2005).

Despite increases in the mean per-student educational expenditure in primary education in China during the period 1989 to 2000, the disparities in per-student spending on education between the highest spending province and the lowest spending province greatly increased (Tsang 2002) as Table 8.1 below shows.

*Table 8.1: Per-student Educational Expenditure for Primary and Lower Secondary Education in China, 1989-2000 (RMB-Yuan per student)*

	Primary education			Lower secondary		
	1989	1997	2000	1989	1997	2000
<i>Mean</i>	166	507	492	353	901	680
<i>Highest spending province*</i>	393	2096	2756	788	2894	2788
<i>Lowest spending province</i>	75	223	261	174	409	420
<i>Ratio of top to bottom</i>	5.2	9.4	10.6	4.5	7.1	6.6

Source: Tsang (2002).

\* refers to provinces, directly administered cities and autonomous regions

Because school funding has been decentralised to the local level and is dependent on the local economy and family contributions, the financial capacities of families and the community become significant predictors of school enrolment and progression (Liu and Troviksvei 2004). At the same time, the returns to education have increased, resulting in a growing gap in income between the well educated and qualified and the poorly educated and unskilled people. The closure of state-owned enterprises (SOEs) that led to mass unemployment and social stratification has also contributed to creating a large disadvantaged social group.

On a personal level, education, especially higher education, has come to be seen as the vehicle for personal development and social mobility. This development of the perception of individual gain through education rather than education to further the common good, has transformed education into a consumption item for which the consumer must pay (Ngok & Kwong 2003). This idea has remained strong despite the fact that as education and social policies have shifted responsibility from the central government to local government and individuals, both the direct and opportunity costs of educating children beyond junior secondary school have increased.

National economic progress and the better financial circumstances of some urban families, in particular, have encouraged these families to seek longer and better quality education for their children. The one child family has only strengthened this



drive as the family's opportunity for social mobility is now concentrated in the one 'investment'.

Education is almost the only means of social mobility, particularly for rural people (Cheng 1994a; Liu and Troviksvei 2004). However, the per capita income of urban residents was more than 3 times that of rural residents in 2003 (UNDP 2005). While this seems high, the actual disparity was much greater as urban residents were more likely to benefit from state subsidies than rural people. For example, urban primary and middle schools were likely to receive large state subsidies which are minimal for rural schools where farmers are regularly required to raise funds for local school operations themselves. Thus, East coast regions and major cities have particularly benefited while rural-urban and East-West disparities have grown.

As schools are required to rely on high tuition fees to fund their services, many poor children are excluded because their parents cannot pay due to financial hardship. UNDP (2005) reported that in 2002, enrolment rates for children aged 7-12 years (i.e. primary school age) were 95 per cent in officially designated poor counties, 93 per cent in poor western counties, and only 66 per cent in the most disadvantaged provinces. For children aged 13-15 ('compulsory' junior high school age), enrolment rates were 85.4 per cent in officially designated poor counties, 84 per cent in poor western counties, and only 62 per cent in the most disadvantaged provinces. More than half of the early school leavers were reported to have left because of poverty or a shortage of 'worker-power' in the home (UNDP 2005).

Chinese society has historically and culturally placed a high value on education and as reform policies have led to greater disparities between education quality across regions and areas and greater differences between types of schools (e.g. regular and 'key' schools), the gaps in quality between schools have become a strong driving force for school choice (Tsang 2003).

Private schooling existed in China for thousands of years, from the time of Confucius and Lao Tzu, but vanished in the Chinese education system between 1949 and the early 1990s during which time the focus of educational policy was on expanding educational access, in line with an egalitarian ideal. The PRC Government's 1993 Outline of Chinese Education Reform and Development provided active encouragement, support and guidelines for the establishment of non-government schools (Tsang 2003).

Parents who can afford to, pay high fees to send their children to non-local schools, for example, 'key', 'demonstration' or 'experimental' government schools that commonly have higher quality teaching staff, more effective leadership, better facilities, higher levels of government investments and achieve better rates of transition to higher levels of study (e.g. junior secondary to senior secondary, senior secondary to university) (Tsang 2003). Similarly parents send their children to people-run (miniban) schools or traditional private schools to prevent their children having to attend a low-quality neighbourhood government school. Further, where students do not achieve the required examination scores for entry to senior secondary education or to a school with high transition rates to tertiary education, parents can choose to pay high fees to enrol them in such a school. However, while

school choice has become a major issue in China, it is primarily confined to urban areas where families have higher incomes and can therefore afford the high fees.

Because of the strong influence of traditional culture, many Chinese people, especially rural people, attach considerably greater importance to the education of males than females. As a result, girls and young women have had fewer opportunities to participate in education, particularly in rural areas. This inequity is evident in all types of education and at all levels, from kindergarten to higher education (UNDP 2005). Further, the proportion of females in study decreases with increasing age and females with a disability are further disadvantaged.

Li and Tsang (2003) argue that despite the legal and structural bases for gender equality in schooling laid down by the establishment of the *Compulsory Education Law* in China in 1986, 'household economic considerations, culturally related expectations regarding males and females at home and in society, the burden of private costs of schooling, and the quality of local schools all influence households' decisions regarding schooling for their children, particularly girls' school attendance' (Li and Tsang 2003:3).

Economic reforms and the growing culture of materialism have emphasised the opportunity cost of educating children for too long, particularly girls and especially if there is little chance of proceeding to post-secondary education and through to a higher/professional income, recovering the costs of schooling and the income lost through the years of study (Li and Tsang 2003). Thus families' willingness, particularly in rural areas, to invest in their children's education has varied, taking account of the potential outcomes, as well as the costs of schooling (Liu and Troviksvei 2004).

While previously the emphasis in China was on the principle of equity – providing equal opportunities for education regardless of gender or regional or ethnic background – the post-reform emphasis has been directed towards greater efficiency, particularly focussed on schools and regions engaged in rapid development and with the required infrastructure. Thus the urban and wealthy (mainly eastern and coastal) regions have benefited while development in rural and poor central and western regions has fallen behind (Ngok & Kwong 2003). Limited educational investment and growing demand, prompted by complex forces including the opportunities for highly skilled young people due to the expansion of enterprise through international investment, have only exacerbated inequities.

China is a huge country that has great diversities and disparities making it difficult for a uniform educational policy, without local adaptation and modification, to apply across the country (Tsang 2003). The '... tensions between education for promoting social equality and education for economic efficiency' (Ngok & Kwong 2003: 9) remain.

## EDUCATION PERFORMANCE

China has made enormous achievements in education since 1949 when 80 per cent of the population was illiterate and only about 20 per cent of children were enrolled in school (UNDP 2005). Improvements have been made in access for primary and lower-secondary age children and also in basic adult literacy, a remarkable achievement, given the huge population and the great geographical, ethnic and cultural diversity across an enormous land (OECD 2005; Tsang 2002; UNDP 2005; UNDP 2005a; World Bank 2005).

During the period 1964 to 2000, there were increases in the mean years of schooling from 3.2 to 7.6 years and a fall in the adult illiteracy rate from 52 per cent to just 9.5 per cent (UNDP 2005). However, improvements have not been uniform: mean years of schooling in China varied in 2000 between urban (8.53 years) and rural (5.18 years) areas and also by gender (males 7.22 years and females 5.82 years) (World Bank 2005: 284). The national gender parity ratio<sup>81</sup> in both primary and secondary schooling has also continued to improve moving from 87 in 1990/91 to 98 in 2002/03 (World Bank 2005).

By 2004, 94 per cent of the country had eliminated youth illiteracy (CIVTE 2005) and China had achieved almost universal schooling at the primary level (Liu and Troviksvei 2004). Secondary school student enrolments also grew, by about 42 per cent between 1995 and 2005, largely as a result of China's extension of compulsory schooling to nine years (OECD 2005).

As Figure 8.2 below shows, the net enrolment ratio of school-age children in primary schools increased from 93.0 per cent in 1980 to 98.95 per cent in 2004 (CIVTE 2005). Strong increases were also achieved in the gross enrolment rates for junior secondary schools – from only two thirds of young people (66.7 per cent) in 1990 to 94.1 per cent in 2004. An important factor was the increase in the promotion rate of primary school graduates from 74.6 per cent in 1990 to 98.1 per cent in 2004. However, more than 10 per cent of students were reportedly still outside school during the last 3 years of compulsory schooling (OECD 2005).

Senior secondary school gross enrolment rates remained static at 48.1 per cent, reflecting the limited capacity of senior secondary schools to accommodate eligible junior secondary school graduates. Gross enrolment rates of higher educational institutes grew from 3.4 per cent in 1990 to 19.0 per cent in 2004, reflecting rapid growth in the promotion rate of senior secondary school graduates, from only 27.3 per cent in 1990 to 82.5 per cent in 2004.

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81 The gender parity ratio is the ratio of the gross enrolment rate of females to that of males at a particular level of schooling

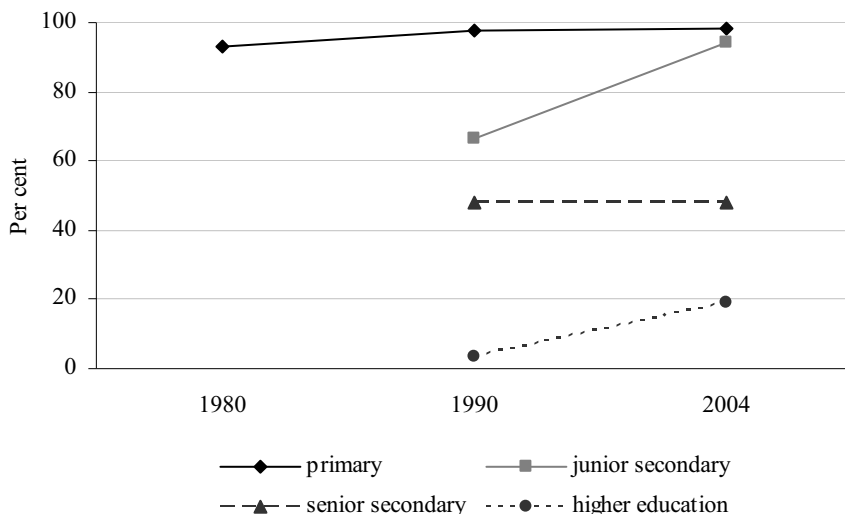


Figure 8.2: Net Enrolment Ratios for Primary and Gross Enrolment Rates for Junior-Secondary, Senior-Secondary and Higher Education, 1980 to 2004

Sources: CIVTE (2005), UNDP (2005) and MOE (1999)

Despite these enormous achievements, China still faces problems in relation to equity in education. Inequity is mainly evident in the gaps between urban and rural, eastern and western region and between male and female education. Though access has to a large extent been achieved at compulsory schooling levels in urban and economically well-developed areas, there are still many challenges in attempting to extend access to compulsory education for all, particularly in rural and poor areas and in attaining a consistency of quality across the country (Tsang 2002).

Educational attainment levels, adult and youth literacy rates, rates of participation and transition between different levels of education, the adequacy of school facilities, teaching staff and material resources and rates of public spending on education are indicators that can be used to explore equity in Chinese education in more detail.

### INEQUITY IN EDUCATION BETWEEN URBAN AND RURAL AREAS

Rural schooling comprises the majority of basic educational activity in China (Liu and Troviksvei 2004). However, urban based people have had access to much better education than country people. In 2000, only 2.5 per cent of people aged 15-64 years in urban areas had not received any education at all, compared with 8.7 per cent in rural areas (UNDP 2005). Similarly, 14 per cent of the urban population had only

received primary education while in rural areas the proportion of people with only a primary level of education was 39 per cent (2000 national census data; UNDP 2005).

China's illiterate population has also been concentrated in rural areas. In 2000, only 4.6 per cent of adults in urban (city) areas were illiterate, but in towns the rate was 6.5 per cent and in rural villages, 11.6 per cent (UNDP 2005). Rural areas have been slow to achieve the growth in education which has occurred in urban areas or to achieve a comparable quality of education.

Inequity in education between rural and urban areas is also reflected in different levels of school conditions and education resources. The proportion of school buildings classified as dilapidated is one basic indicator of school conditions. As Figure 8.3 below shows, the highest percentage of dilapidated buildings to floor space in general senior secondary schools has been in rural areas, followed by counties and towns, with the smallest percentage in urban areas. Though conditions have improved in urban areas, school conditions in county, town and rural areas have been consistently poorer than those in urban areas since 1989 and the disparities have grown, not diminished. In 2001, almost 6 per cent of general senior secondary school space in rural areas was considered dilapidated compared with less than 2 per cent in urban areas.

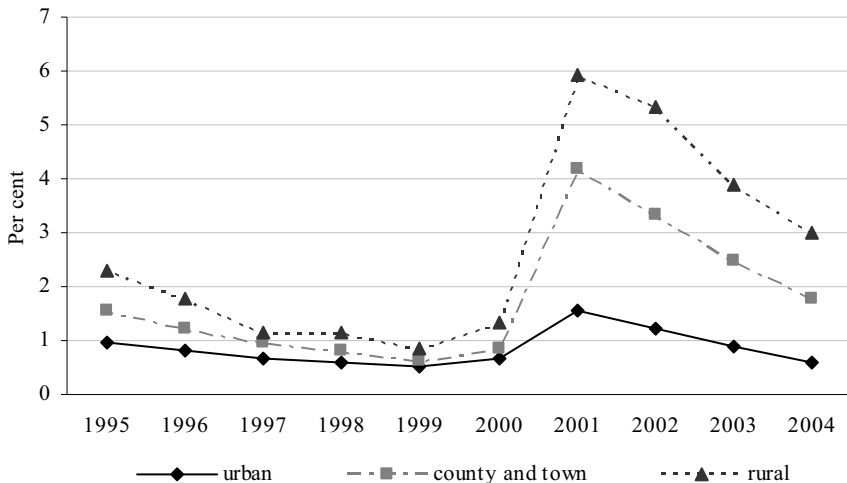


Figure 8.3: Percentage of Dilapidated Buildings to Floor Space of General Senior Secondary Schools in Urban, Country and Town and Rural Areas

Source: Educational Statistics Yearbook of China, 1989-2004.

Inequity in education between rural, county and town, and urban areas is also reflected in the availability of school resources such as computers, print and electronic books and magazines in libraries, and fixed assets available to be utilised by students. These resources are particularly important not only for specific study purposes but also for the development of information and communication technology (ICT) literacy and a broader awareness of urban China and post-school education and employment opportunities. While differences were small between counties and towns and rural areas, they were somewhat larger between urban and rural areas, and between urban areas and counties and towns, as Table 8.2 below shows.

Table 8.2: Senior Secondary School Resources, Per Student (2004)

	Average per student		
	Urban	County & town	Rural
<i>Personal computer (set)</i>	0.13	0.07	0.08
<i>Books &amp; magazines in libraries (volume)</i>	27.24	18.33	21.84
<i>Electronic books &amp; magazines in libraries (disk)</i>	1.02	0.54	0.46
<i>Total volume of fixed assets (in RMB 10,000)</i>	1.46	0.90	0.95

Source: Calculated using Educational Statistics Yearbook of China (PRC, 2004)<sup>82</sup>

Urban students were better resourced on all measures than county and town or rural students. They comprised only one third of all senior secondary school students in China in 2004 (PRC 2004) but had access to close to the same number of computers (1.07 million) as the two thirds of students who lived in town, county or rural areas. In addition, a student in an urban area, on average, had access to almost twice the volume of electronic books and magazines at school than a student in county and town or rural areas.

Gaps between urban and rural education are also evident in the level of preparatory training of teachers. While almost 60 per cent of teachers in urban primary schools have completed junior college education, in rural areas, only 25 per cent of teachers have done so (UNDP 2005). Rural schools also commonly use many substitute or part-time teachers, a practice which rarely occurs in urban areas.

The differing rates of transition to post-compulsory education are further indicators of the urban-rural divide. Between 1990 and 2002, the urban-rural disparity did not diminish, but instead gradually widened after 1997 as a result of the growing inequality of income between urban and rural areas. The rate of transition to senior high school study among urban students grew strongly during the period 1999-2002, from 55 per cent to 74 per cent, while the proportion of rural students

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<sup>82</sup> In 2004, there were 7,982,201 students enrolled in senior secondary schools in urban areas, 11,670,174 in counties and towns, and 2,551,326 in rural areas.

proceeding to senior high school only grew from 19 per cent to 29 per cent (UNDP 2005).

INEQUITY IN EDUCATION BETWEEN EASTERN AND WESTERN REGIONS

Inequity in education is also prevalent between eastern and western regions of China. As Figure 8.4 below shows, in 2003, the 5 provinces or autonomous regions with the highest percentage of dilapidated buildings to floor space in vocational high schools were Inner Mongolia, Gansu, Anhui, Yunnan and Qinghai, four of them located in western regions. Conversely, the 5 provinces and cities with the lowest percentage of dilapidated buildings were Tianjin, Shanghai, Zhejiang, Jiangsu and Liaoning, all of them eastern coastal provinces or municipalities.

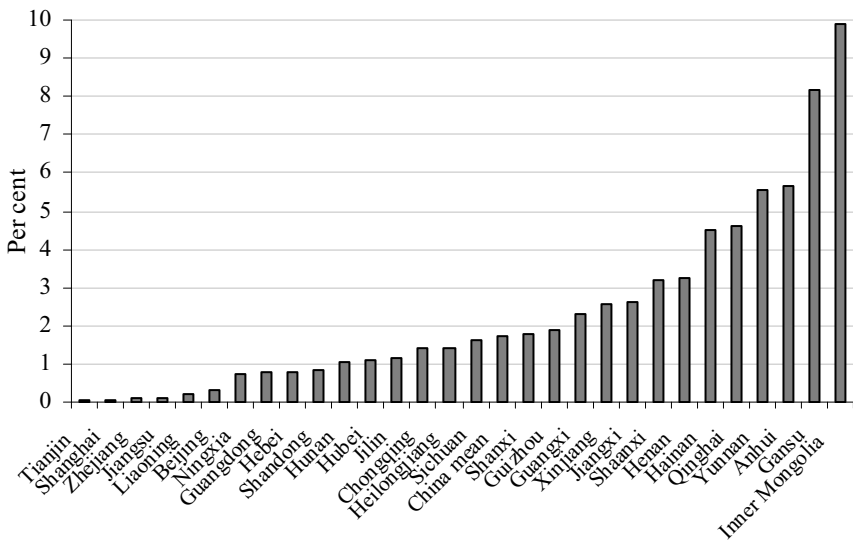


Figure 8.4: Percentage of School Buildings in Vocational High Schools (VHS) that are Dilapidated, by Province, 2003

Source: Educational Statistics Yearbook of China, 2003 (PRC 2003)

Inequities in education between eastern and western regions have been mainly caused by different economic contexts and decentralised education funding mechanisms. For both geographical and historical reasons, there is a large gap in the level of economic development between eastern and western regions. In 2003, the GDP in the eastern and highly economically developed provinces of Shanghai, Beijing, Tianjin, Zhejiang and Guangdong ranged from 46,718 to 17,213 RMB

Yuan, but in the western and less developed provinces of Ningxia, Guangxi, Yunnan, Gansu and Guizhou, the range in GDP was only from 6,691 to 3,603 RMB Yuan (PRC 2004). The GDP in Shanghai was almost 13 times that of Guizhou.

As a result of such economic disparities, the western regions are not in a position to provide the same level of funding for education as eastern regions. But China's education administrative and financial system requires funds for kindergarten, primary and secondary schools, and local higher educational institutes, to be mainly provided by local government, resulting in wide disparities in education funding between eastern, central and western regions. For example, as Table 8.3 shows, in 2004, per student education funding allocations for general higher education institutes, general middle schools and primary schools in Beijing, were on average, almost 3.6, 3.8 and 3.7 times the funding allocations in Qinghai (CSP 2004).

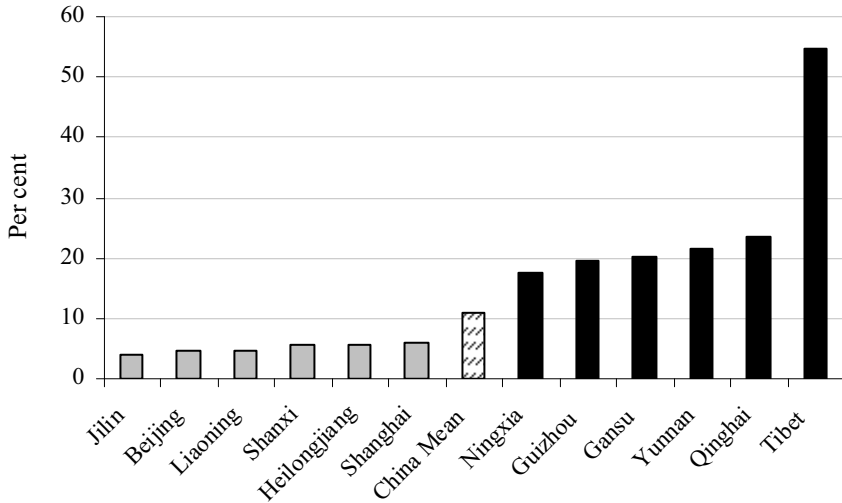
*Table 8.3: Education Funding Allocation, per Student, in RMB-Yuan, 2004*

	General higher institutes	General middle schools	Primary schools
<i>Beijing</i>	30822.67	7667.27	5245.24
<i>Hunan</i>	10895.19	1744.57	1133.09
<i>Qinghai</i>	8557.32	1999.14	1430.26

Source: Educational Finance Statistical Yearbook 2004, China Statistics Press (CSP 2004)

Inequity in education between eastern and western regions is also reflected in the levels of illiteracy and semi-illiteracy in the adult population (aged 15 years and over). As Figure 8.5 below shows, the 6 provinces with the highest percentage of illiterate and semi-illiterate people in 2004 were Tibet, Qinghai, Yunnan, Gansu, Guizhou and Ningxia, all of them located in western regions. In addition, Tibet and Ningxia are autonomous regions and have high proportions of non-Han Chinese people (ethnic minorities). The 6 provinces with the lowest percentage of illiterate and semi-illiterate people were Jilin, Beijing, Liaoning, Heilongjiang, Shanxi and Shanghai. Among these are two municipalities with the status of provinces, Beijing and Shanghai, and three regions located in the north-east of China, a region with a very strong economic history.





*Figure 8.5: Percentage of Illiterate and Semi-Illiterate People of Adult Population, by Selected Regions*

Source: Educational Statistics Yearbook of China, 2004 (PRC 2004)

### INEQUITIES IN EDUCATION BETWEEN GENDERS

As Figure 8.6 below illustrates, participation rates of girls in kindergarten and primary schooling have been consistently lower than those of boys. In addition, during the period 1998 to 2004, the participation rates of girls declined: the difference in participation rates in kindergartens expanded from 5.0 per cent to 9.7 per cent and in primary schools, from 4.7 per cent to 8.2 per cent.

The female participation rates in general and vocational secondary schools during the period 1989 to 2002 and in higher education for 1998-2004 are shown in Figure 8.7 below. While participation rates have been generally increasing across these three forms of education, the rate for females only once climbed higher than 50 per cent, in vocational secondary schools in 1998. While strong gains have been achieved in rates of female participation in higher education, these gains were from a low base and participation declined steeply between 2003 and 2004.

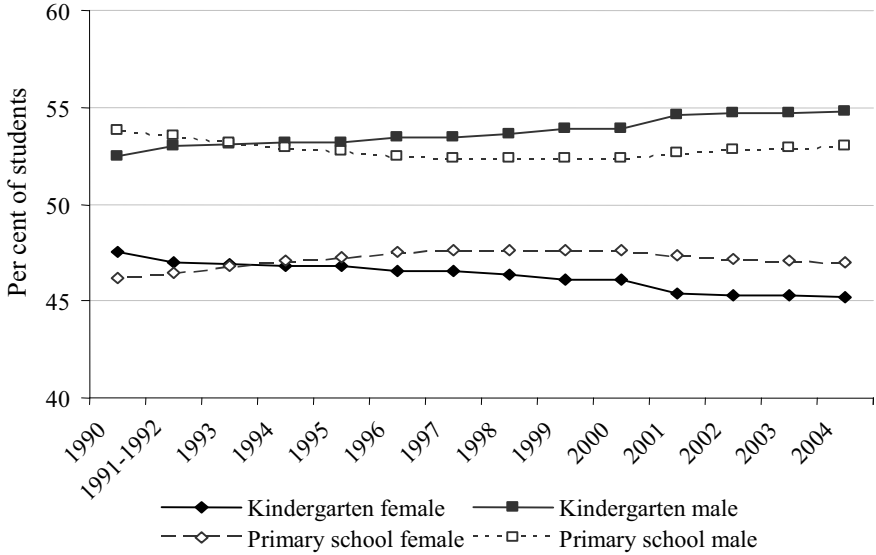


Figure 8.6: Participation in Kindergarten and Primary School, by Gender, 1990-2004

Source: Educational Statistics Yearbook of China, 1990-2004, PRC.

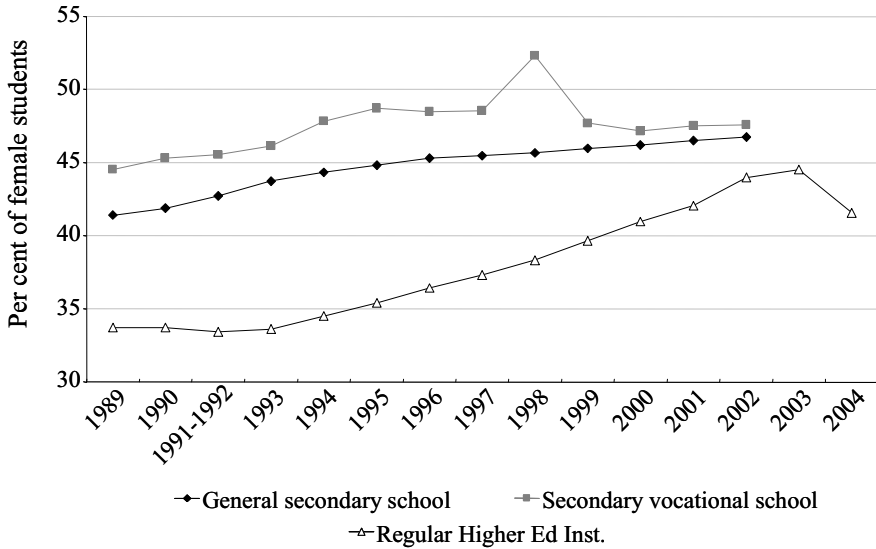


Figure 8.7: Female Participation in General Secondary School, Secondary Vocational School and Regular Higher Education, by Year, 1989-2004

Source: Educational Statistics Yearbook of China, 1989-2004, PRC.

Gender inequity in education is also reflected in the number of women who are illiterate or semi-illiterate. As Figure 8.8 below clearly shows, although both male and female illiteracy or semi-illiteracy declined between 1998 and 2004, significant gender differences still exist, with 2.6 times more women than men illiterate or semi-illiterate in 2004. In addition, even stronger differences prevail when provincial differences are also considered. The illiteracy rate for men in five wealthy provinces was only 3 per cent, while for women in five poorly developed provinces, the rate was more than 8 times higher (25 per cent) (UNDP 2005).

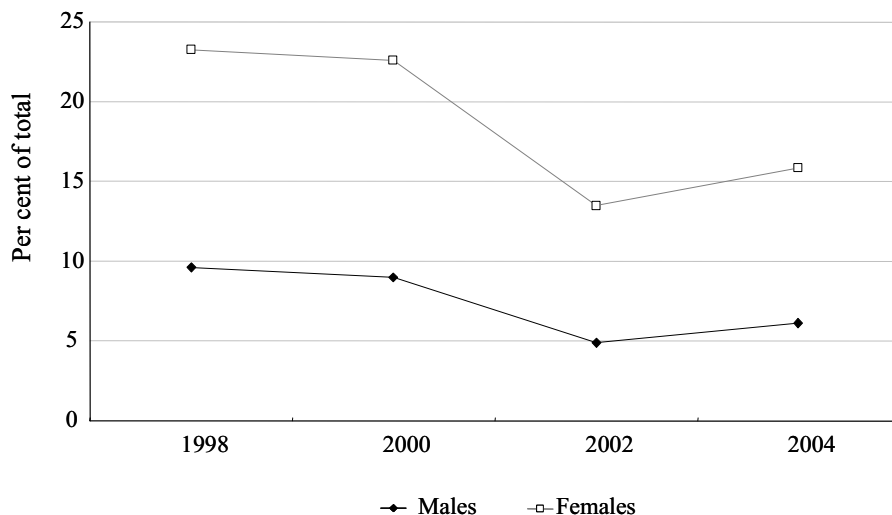


Figure 8.8: Illiterate and Semi-Illiterate Population<sup>83</sup> Aged 15 and Over, by Gender, 1998-2004

Source: Educational Statistics Yearbook of China, 1998-2004.

#### POLICES AND MEASURES TO RESOLVE INEQUITY IN EDUCATION

China has achieved impressive societal and economic development since the 1980s, including a very high rate of growth of GDP, but despite overall improvements, societal inequities have grown. With the decile of the population with the highest-income earning, on average, eleven times more than the lowest-income decile (UNDP 2005), these societal inequities are likely to cause many significant problems with the potential to influence China's social stability.

The Chinese government has clearly recognised these issues and their potentially serious impact (UNDP 2005). In 2004, the Chinese government proposed the

<sup>83</sup> Illiterate and semi-illiterate population in this table refers to the population aged 15 and over, who are unable, or find it very difficult, to read.

concept of a 'Harmonious Society' to be the future development goal of China, with equity and justice the two main characteristics of this society (CPC 2004). Attainment of educational equity is one of the important foundations on which to build societal equity and in recent years, the Chinese government has adopted a series of key policies and measures to improve equity in education.

Firstly, to address urban-rural disparities, China has developed a funding guarantee mechanism for compulsory level education in rural areas to increase financial investment in rural education and strengthen the responsibility of government (PRC 2006). The 'Announcement of deepening reform on funds guarantee mechanism of rural compulsory education of State Council' (State Council 2005) outlined the decision to draw all rural compulsory-level education into the scope of a public financial guarantee and to establish a rural compulsory education guarantee mechanism through which central government and local government would share the responsibility of funding rural compulsory education. In particular, the 'Announcement' outlined the following mechanisms:

*Introduction of subsidies for student tuition fees, learning materials and residential costs in western regions:*

From 2006, primary and junior secondary students in western regions will not be required to pay all tuition fees and incidental fees which instead will be paid by central and local governments; the central government will also pay the textbook fees for students from poor families in western and central regions, and local government will provide subsidies for boarders (students resident at school).

*Increase in public funding for compulsory education in rural areas:*

The level of guaranteed public funding for rural compulsory education level schools will be raised.

*Establishment of an effective mechanism for maintenance and rebuilding of compulsory education level school buildings in western regions:*

Allocation of funds for maintenance and rebuilding of school buildings in western and central regions of China will be shared by central and local governments, but the funds in eastern regions will be mainly provided by local government, with the central government providing only minimal support for eastern regions aimed at encouraging local investment.

*Introduction of a mechanism to guarantee school teacher salaries in rural areas:*

A salary guarantee system for primary and secondary school teachers in rural areas will be introduced to ensure that all teachers receive appropriate and sustainable salaries.

These mechanisms, designed to address imbalances between urban and rural education, are not the first initiatives to have been developed. China has already implemented some strategies focused on balancing development of compulsory education between rural and urban areas.

In 2004, special funds allocated to rural compulsory education exceeded 10 billion RMB Yuan, an increase of 72 per cent compared to the funds provided in 2003. In 2003, China launched a 'Modern Distance Education Program for Primary and Middle Schools in Rural Areas', a strategy that has attempted to address rural school problems such as inadequate education resources and low teacher quality. Targets set by this program, to be met by 2007, included that: all junior secondary schools in rural areas will have ICT-equipped classrooms; all primary schools will have established the capacity for satellite delivered teaching and learning; and rural primary schools will also be equipped with CD-playing equipment and CD resources for teaching and learning<sup>84</sup>.

Secondly, to address imbalances in the development of education between eastern and western regions, a development program specifically focused on education in western regions was established. In accordance with the principles outlined in the 'Announcement of several policies and measures for the implementation of great development of western regions by State Council' (State Council 2000), China has implemented the 'Education development program of western regions – 2004 to 2010'.

Targets set by this program include that: by 2007, western regions will have 9 years of compulsory education and the youth illiteracy rate will have decreased to less than 5 per cent; by 2010, the gross enrolment rate of students in junior secondary schools will reach 95 per cent, and the youth illiteracy rate will continue to be reduced. To achieve these objectives, the Chinese government has implemented the following five programs in western regions<sup>85</sup>:

*A program for the elimination of youth illiteracy and achievement of 9 years' compulsory education in western regions:*

To be implemented during the period 2004 - 2007, a special funding allocation of 10 billion RMB Yuan has been established by the central government for this program.

*Program to increase the use of information technology in education:*

This program was established to increase the investment in the information and communication technologies (ICT) infrastructure in education in western regions; to accelerate the development of ICT use in education in rural primary and secondary

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84 In September of 2003, the national conference of rural education held by the State Council established the 'Modern Distance Education Program of Primary and Middle School in Rural Areas'.

85 "Education development program of western regions from 2004 to 2010" (Ministry of Education, Western Region Development Office of the State Council, September, 2004).

schools, in vocational education schools and in higher education institutes; to improve the development of ICT-based teaching and learning resources; and to strengthen training for education ICT management staff.

*Vocational education vitalisation program:*

Processes were established whereby central and provincial governments provide counties with comparatively good conditions with special funds to: establish vocational education centres (schools); implement a vocational education study assistance scheme to provide students from poor families with financial support including loans, discounted fees or fee exemptions; and provide support to develop a series of higher vocational education institutes with clear vocational education focus and characteristics.

*Innovation and development program for higher education institutes:*

This program will: provide support in western regions aimed at improving the teaching and learning conditions of higher education institutes; extend the scale of higher education; promote a system of innovation in higher education institutes in western regions; help every province or autonomous region in western regions to establish one higher education institute; implement an academic leadership and innovation team program; and accelerate the development of the infrastructure and conditions necessary for scientific and technological innovation.

*Teacher quality improvement program:*

To strengthen the preparation of teachers and to continue to implement the 'University student service for western regions program', special funds have been allocated to attract university graduates and other trained staff to teach in remote and impoverished areas of western regions for a defined period of time.

## OUTCOMES OF INTERVENTIONS

After several years of implementation of specific programs, some aspects of equity in education in China have been improved. The disparities in public education resource allocation for compulsory education between eastern, central and western regions are narrowing. In recent years, the increasing rate of government investment for compulsory education in rural areas has become higher than that in cities. Average per-student infrastructure in rural schools is becoming similar to that of urban schools. The gap in levels of availability of education technologies between rural and urban areas is also becoming smaller and the proportion of teachers in rural schools who are appropriately qualified is increasing.<sup>86</sup> However, some disparities between eastern and western regions have continued to increase including average

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86 "Report of national educational inspectors: 2005".

per-student funding allocations and the availability of high-quality education resources in schools.

Equity in education is not an issue that concerns only education, but is also a broader societal issue. China is still in a transition phase and social problems such as those arising from imbalances in economic development, from imperfect systems of social resource allocation, and from unreasonable ideologies, will pose huge challenges for the achievement of equity in education.

The 'Program Outline of the 11<sup>th</sup> Five Year Plan of Economic and Societal Development of the People's Republic of China' (PRC 2006), endorsed in 2006, reiterates that China will strengthen policies and strategies for the building of harmonious development between rural and urban areas and among different regions, with central and provincial governments to increase the financial support for poor counties. This Five Year Plan acknowledges that to improve equity in education, public funding needs to favour rural areas, central and western regions, impoverished and ethnic minority communities, and students from poor families. In addition, charitable funding agencies will be encouraged to provide financial support for students from impoverished families and the financial support system for students from poor families will be refined.

The Five Year Plan also seeks to improve the development of rural compulsory level education and to reduce the dropout rates for rural students, especially female, ethnic minority group and economically disadvantaged students. It has also set a target of 95 per cent for student retention rates in the third grade of junior secondary school and will require teacher training programs to provide at least one specialised training opportunity to half of all teachers employed in central and western regions, over 5 years (PRC 2006).

The reasons for China's inequities in education are very complex and include political, economic, cultural, systemic, historical and geographical factors. In striving to achieve equity in education, China has learnt from its experiences and recognised that achievement of equity in education is fundamentally important to the attainment of the broader goal of social equity. Thus the goal of achieving educational equity needs to be integrated with social development goals.

The responsibility for the realisation of educational equity rests on all levels of government, both central and local. The central government plays an important role through policy development and strategic planning, allocation of funding and pilot program implementation but commitment and support for strategies and effective implementation also need to be strong at the local level. The Chinese government has recognised that information and communication technologies (ICTs) can play a vital role in the improvement of educational equity in remote areas through providing access to high quality education resources irrespective of distance or disadvantage. Therefore establishment of the required infrastructure to facilitate the use of ICTs across rural and remote regions is a particularly important priority.

The 11<sup>th</sup> Five-Year Plan (PRC 2006) places priority on education, focusing on three main tasks of 'spreading, developing and improving education'. However, China still faces serious issues and barriers in accelerating the processes of restructuring education, promoting balanced development of education across

regions and population groups and building the learning society it seeks across the far reaches of the country.

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## Equity and Growth in a Liberalising India

*Sangeeta G. Kamat*

While globalisation presents many potential benefits, it also poses special challenges. In a democracy, it is necessary that the process of reform *be perceived as* equitable and caring. – Prime Minister Manmohan Singh, 2004. (Author's italics)

## INTRODUCTION

*The education-development puzzle*

India represents something of a paradox. It has achieved rapid economic growth, currently second only to China in the region. Yet it has a poor record in education, at least in comparison with China and Sri Lanka, its northern and southern neighbours. The literacy rate remains low, at 59.5 per cent, even after fifty years of independence, and half of all school children have dropped out by Grade V. These, and other measures of gender, caste and rural-urban inequalities in basic education, are the frequently cited statistics of educational underdevelopment which suggest a failure to achieve even minimal human development goals (see Figure 9.1). With India's dismal education record, no-one expected that, following China, India would emerge as the fastest growing economy in the region with an average annual growth rate of 7 per cent, projected to rise to 8-9 per cent for the next five to ten years.

This combination of rapid growth and low educational levels seems to fly in the face of mainstream development theory and raises a number of questions. Is the recent economic surge an effect of India's new 'open economy'? Or is it rather due to the education policies of the pre-liberalisation period? A review of the literature suggests that the high growth rate is a combined effect of the state's education policies (pre-liberalisation), specifically those related to higher education, and of trade liberalisation policies that came into effect during the global Information Technology (IT) revolution. Commentators explain it as a happy, albeit unplanned coincidence of national education policies and global economic changes that has enabled India to leapfrog from developing country status to an emerging economy in less than a decade. The media and economic analysts narrate the story of India's economic success as one that has occurred through the specialised route of IT,

greatly skewing demand and supply in the education sector. Education has contributed to development, but in a highly lopsided manner.

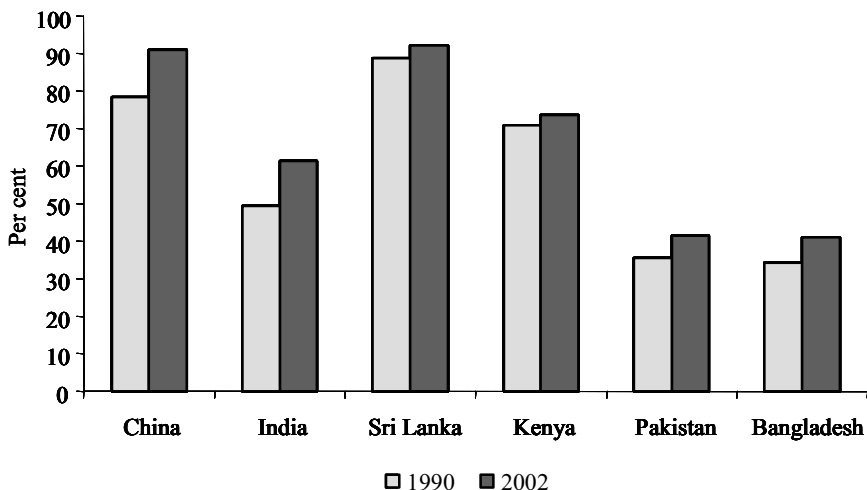


Figure 9.1: Adult (15 years and over) Literacy Rates

Source: UNDP, 2002

Equality remains an elusive goal. Policy makers today want to maintain rapid economic growth, but also to promote equity, and this concern for ‘growth with equity’ has raised the profile of education reform on the state’s policy agenda. The lack of universal basic education is seen as exacerbating economic inequality, which may have disastrous effects on social cohesion within the future Indian polity. Interestingly, the private sector (represented by organisations such as NASSCOM and the Confederation of Indian Industries), hitherto largely unconcerned with non-tertiary education, now argues the need for combining growth *with* social cohesion, and has consequently begun to voice concern over the failure of basic education goals.

The unexpected gains from higher education, a consequence directly connected to the globalisation of technology and trade, sits uneasily with the massive failure of basic education and has led to greater scrutiny of the education sector. While policy makers have always claimed education as critical to India’s social and economic development — although arguably more in rhetoric than in practice — education reform has gained salience in the context of globalisation. It has moved from being a peripheral concern to becoming an important sector in the national reform process. The discussion has moved from a focus on access to the need for reforms that will make education effective and relevant for a changing economy, guarantee equality of opportunities and outcomes, and strengthen the country’s international competitiveness.

Systematic research on the impact of globalisation on the Indian education system remains limited, but there are excellent reviews of the state of basic education and higher education in the country. This chapter draws on this secondary literature to assess how education policy engages with the new macro-economic environment and responds to the socioeconomic changes that are a consequence of increased global integration. The scope of this paper is limited to the formal education system with a focus on the skewed relation between basic education and higher education. While non-formal and adult education are also relevant to improving the earning capacity of the working poor, policies pertaining to these appear to be peripheral to the process of education reform today. Two main questions guide this analytical review: 1) how is the macro-economic context redefining the education sector? and 2) what kinds of reforms are being put into place to address growth and equity objectives in a liberalising economy and society?

In this chapter, we offer a review, firstly, of key elements of the national context in India. These include demographic aspects, federalism, the economic dominance of agriculture and the unorganised labour market. A fuller discussion would need to include the emerging threats to pluralism and secular democracy posed by Hindu nationalism (Kamat, 2007). The next part of the paper examines the role of education in economic and social development since 1950. The initial focus of this discussion is on elite bias in education policy (dating back to independence and colonial days), before turning to structural inequalities in school education and the growth of higher education (and inequalities at this level). The chapter then considers the 'problem of two Indias'. It explores the impact of globalisation and economic liberalisation and how these developments set the scene for today's challenges in Indian education at different levels. Following this is a discussion of contemporary reassessments of Indian education policy in light of developments over the last decade. Finally, a brief conclusion reflecting on the changing role of the State.

### KEY ELEMENTS OF THE NATIONAL CONTEXT

India is the second most populous country in the world with over one billion people. A majority of the population (64 per cent) are between 15-64 years and 30 per cent of the population is in the 0-14 age range. Governance and policymaking is complicated by the exceptional social, cultural and political diversity of the country. It is the world's largest democracy with an astonishing array of political parties that represent different political ideologies or regional, religious and caste groups. Having led the struggle for independence, the Indian National Congress (hereafter referred to as the Congress Party) was the most influential party for the first few decades after independence. The Congress Party enjoyed uninterrupted electoral victories until the 1977 general elections that brought the Janata Party (People's Party) to power. Today there are at least 19 political parties of significant influence and size, many of them regional parties that rule at the state level. At the national level, two political parties have emerged as the most influential — the Congress Party and the Hindu Nationalist Party (the BJP). Neither party, however, is able to

form a government without forming a coalition with other national and regional parties, testimony to the splintering of political allegiances among the electorate. The political scene today is one of multi-party alliances and strategic coalitions that work across ideological boundaries. It would be accurate to say that political diversity and fragmentation of electoral politics have only increased in this period of economic globalisation.

India's social and cultural demographics are no less complex. There are fourteen main official languages, though twice that number are recognised by the constitution. English is an associate language but enjoys more status and is more widely used in government and commerce than the national language, Hindi, which is the mother tongue of only 30 per cent of the population. A majority of the population identify as Hindu, comprising 80 per cent of the population. Among the minority religions, Muslims represent 13.4 per cent, Christians 2.3 per cent, Sikhs 1.9 per cent and other religions 2.5 per cent. In the last years of the anti-colonial struggle, the Indian National Congress was already looking ahead at the challenges of governing a multi-ethnic and multi-lingual polity and proposed redrawing state boundaries along linguistic lines to maintain social cohesion. Accordingly, states are free to use any language from among the officially recognised languages for administrative and educational purposes. Further, the constitution guarantees the right of all citizens to be educated in their native tongue. Religious minorities are also allowed to establish their own schools and adopt their own curriculum.

The hierarchical caste system of the Hindu community introduces yet another level of complexity that shapes political, social and cultural life. Upper caste dominance in public affairs (including in educational institutions) remains a serious issue. Scheduled Castes (SC) are 16.48 per cent of the population and Scheduled Tribes (ST) are 8.08 per cent of the population and represent the most oppressed and exploited sections of society. There are different protective legislations and affirmative action policies to improve the social and economic condition of SC and ST communities. However, caste identities remain strong and though caste-based discrimination is a criminal offence, both subtle and overt discrimination, particularly against Dalits, is embedded in all forms of social interaction and remains a serious issue.

Establishing a national identity among a highly heterogeneous population was a significant concern for the leaders of post-colonial India. Nehru's vision of modern India was based on the idea of a national identity that would transcend caste, regional, linguistic and regional identities. At the same time national unity was not to be at the cost of diversity and pluralism. The reorganisation of the country into linguistically constituted states was a strategy to maintain social cohesion. Given the demand for the English language, and cultural globalisation in general, how far linguistic identities remain a basis for social cohesion is debateable. The hierarchical and exploitative caste system and feudal relations, with their fixed social norms and ascribed roles, have also formed a basis of social cohesion in modern India.

*Federalism and centre-state relations*

India has a federal structure in which powers are shared between the central government and state governments. Until 1976, state governments bore full responsibility for policies and planning in education. Education was then placed on the concurrent list and is the joint responsibility of the central and state governments. Differences that developed among states in the early decades of independence in the management and financing of education still remain. State governments bear most of the educational expenditures in their states with a small percentage being contributed by the Central government. Educational expenditures vary among states resulting in unequal educational outcomes. The Central government allocations to states were intended to reduce disparities between states. With economic liberalisation, the Central and state governments have reduced budgets for social sector spending. Consequently, the Central government's capacity to equalise state education budgets is weakened, and decentralisation emerges as an agent of inequality (see Chapter 1). Meanwhile state governments that have a better record on education are able to attract donor and private sector investment more easily, thereby increasing educational disparities between states. State governments have considerable autonomy in deciding education policy including matters of curriculum, examinations, teachers' salaries and funding of innovative programs.

The growth of regional politics and the redrawing of the map of India to create new states, suggest a new trend toward regionalisation of politics and economics. For example, Jharkhand, a predominantly tribal region rich in natural resources, was part of the northern state of Bihar, but the demand for a separate state of Jharkhand was acceded to in 2000. Two more new states were also formed in 2000 and there are proposals for new states pending with the government. Regionalisation appears to have intensified with economic liberalisation wherein communities that are native to the region seek to control resources in their region and have regional parties represent their interests. The growth in influence of regional parties also makes it more difficult for the central government to implement national plans and targets. Consensus building among various power blocs has acquired more importance and is suggestive of the robustness of Indian democracy in the context of large-scale economic reform.

*Dominance of the agricultural and unorganised sectors*

The Indian labour market has a dual structure. The unorganised and informal sectors are characterised by an absence of regulation and labour laws and include construction workers, agricultural workers and casual labour. Within the unorganised sector, informal sector labour refers, for example, to home-based production that is excluded from national accounting procedures. The unorganised sector is the source of livelihood for a majority of the population (see Table 9.1). Approximately 92 per cent of the labour force is employed in the unorganised sector. The organised sector employs only 8 per cent of the total workforce. Only 2.5 per cent of this is employed in the private sector. The rural sector is largely

unorganised and comprises farm based and non-farm based employment. In 1991, the rural population comprised 74.3 per cent of the total population. That a majority of the population remains rural and derives its livelihoods from farm and non-farm based casual work has serious implications in a globalised economy in which urban service sector employment is the growth sector. What is the proposed and potential role of the agricultural and unorganised sectors in a globalised economy? What policies will ensure an effective relation between education-employment-equity for these sectors?

*Table 9.1: Distribution of Labour Force by Sector*

Sector	Shares in Employment		Shares in Net Domestic Product
	1993-1994	1999-2000	
<i>Unorganised Agriculture</i>	63.56	59.95	28.84
<i>Unorganised Non-Agriculture</i>	29.17	33.0	31.62
<i>Organised Agriculture</i>	0.39	0.35	1.08
<i>Organised Non-Agriculture</i>	6.88	6.70	38.47

Source: Bhalla, 2003.

In a developing economy with a large agrarian sector, a culturally diverse polity, and a federal political system, whether economic reform will be integrative rather than divisive, and lead to growth and equality, will depend greatly upon balancing the contradictions between the selective opportunities afforded by economic reforms with the needs and capacities of India's vast majority of working poor. Ensuring that the reform process narrows the social and economic divisions between different social groups – rural versus urban, low castes and tribals versus upper castes, the Hindu majority versus different religious minorities – is an equally pressing concern and needs to become an integral part of the reform process to maintain social cohesion, peace and stability.

#### ROLE OF EDUCATION IN ECONOMIC AND SOCIAL DEVELOPMENT: 1950 TO 1990

##### *Education policy in independent India: a case of elite bias*

In post-independence India, education policy was motivated by the dual purpose of building a strong economy and promoting a spirit of secularism, democracy and national unity within the diverse polity. Such an ambitious program of education was not unique to India and was a vision shared by all newly emergent nations in

Africa, Asia and Latin America in the fifties and sixties. On reviewing India's education record, one observes both exceptional successes and inexplicable failures in meeting these twin objectives. On the positive side, a certain degree of democratisation was achieved and a system that in the colonial and pre-colonial periods served only a privileged few became accessible to a majority of the population including women, and tribals. The number of schools, colleges and universities expanded significantly to accommodate the growing numbers who sought access to formal education. Values of secularism, toleration and affirmation of diversity were endorsed in the national curriculum framework. The rights of religious minorities to set up their own educational institutions were protected. The public higher education system grew at a rapid pace, and produced substantial numbers of high quality professional, technical and academic workers. State-subsidised engineering and science education was seen as comparable to the best in the world. Publicly funded autonomous research and development centres contributed significantly to basic and applied research in the sciences. A free and independent press in English and vernacular languages flourished and the state promoted the development of fine arts and culture.

On the negative side, Dreze and Sen (2002: 12) note that in elementary education "...India has done worse than even the average of the poorest countries in the world". They suggest that the failure to achieve basic education objectives is unjustifiable given that countries such as Sri Lanka, Costa Rica and Jamaica that adopted mixed economy policies similar to India's were able to ensure universal coverage of basic education and radical improvements in basic quality of life indicators in a short period of time. Furthermore, the impact of education policy on caste and gender discrimination, rural-urban inequities, and poverty alleviation remains negligible.

The constitutional directive of "free and compulsory education to all up to the age of 14 within a period of ten years from the commencement of the constitution" remained unfulfilled at the end of four decades of planning. This has become the single most damning indictment of Indian education policy. In his study on child labour in India, Weiner (1991) explains this failure as reflective of the dominant political ideology of that time:

India's policymakers have not regarded mass education as essential to the country's modernisation, leading to all the ills facing the country today. Instead they put their resources into higher education that, it believes, is capable of creating and managing a modern enclave economy" (1991:176).

In Weiner's view, the insufficient support for basic education reflected the bias of leaders and elites who did not consider formal education of much use or interest to peasants and farmers. This elite bias has been explained as a consequence of both colonial and national policies. Most significantly, the British colonial education system that trained a small class of natives to serve in the colonial administration, educated prominent nationalist leaders in British universities abroad, and built on caste-based ideologies that maintained education as the preserve of upper castes, created social distance between the leaders and the masses and encouraged a culture of paternalism. The development paradigm of that period and the "trickle down"



theory of growth promoted by international agencies and First World governments justified education policies that accelerated the development of modern industries and high skills science and technology at the expense of basic education. In his analysis of the neglect of basic education and inequities in the education system, Sen (2004) also concludes that the main problem is the continued reproduction of elite bias in Indian education policy. The following graph shows the changes in budget allocations for elementary and secondary education in comparison to other subsectors of education in the five-year plans.

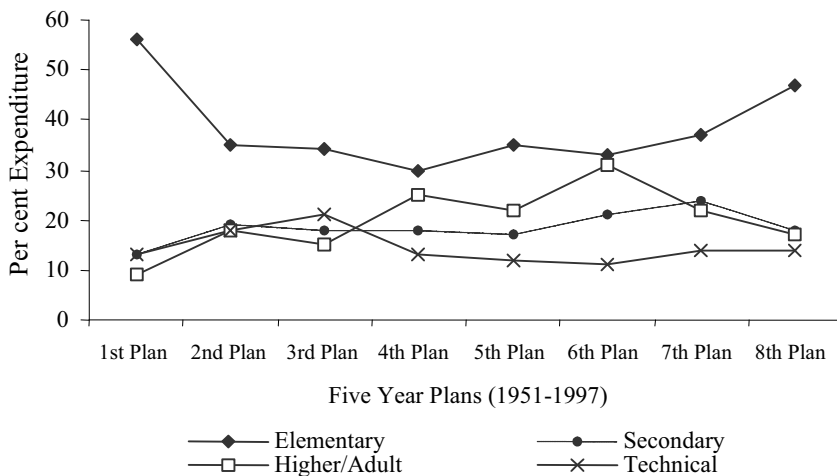


Figure 9.2: Trends in Education Expenditure

Source: GoI, 1997

In 1964, the Kothari Commission presented a trenchant critique of the education system and recommended radical changes in education policy to redress inequities in opportunities. The Commission recommended a substantial increase in the education budget, setting a target of 6 per cent of GDP. A common school system that had a proven record of success in developed countries was proposed to provide equal access to children from socioeconomically disadvantaged groups. The mismatch between the content of education and the skills and qualifications required for employment in the rural sector was also highlighted. The report also stressed the need for curricular reform to strengthen national unity and the development of socially responsible citizens. While the Kothari Commission report was much lauded for its timely and relevant recommendations, the actual policies that resulted from it were piecemeal and watered-down versions of the original recommendations. Moreover, the government focused on those recommendations in the report that aligned with elite interests, such as the emphasis on science and maths education at the school level and science and engineering education in universities (Ghosh, 1995).

In 1986, Prime Minister Rajiv Gandhi announced a National Policy on Education to improve the quality of education. *Operation Blackboard* was launched to improve the provision of basic infrastructure such as blackboards, playgrounds, teaching aids and drinking water. To improve quality in the classroom, *Operation Blackboard* recommended a teacher aide in each classroom to support the regular class teacher. The NPE also recommended private sector provision of education and by the end of the plan period there was an increase in both demand for and supply of private school education, especially in urban areas. De et al (2002) document that between 1986 and 1993, the private unaided schools' intake was nearly 51 per cent of the total increase in enrolment in urban India. Measurable improvements in enrolments could be seen by the beginning of the nineties for both boys and girls, but dropout rates remained distressingly high, at 42.6 per cent in 1990-91 between Grade I to V and more than 60 per cent between Grade I to VIII (Nayar, 2002). *Operation Blackboard* was implemented partially and unevenly, and poor districts and rural schools continued to suffer from inadequate infrastructure and poor quality teaching. The private school sector grew quickly, benefiting from state subsidies while government schools continued to function poorly. Parents who could avail themselves of private schools opted for them, and the poorest of the poor were left behind in government schools.

#### *Structural inequities in the school system*

India's school system is divided into various levels. At the primary stage, pre-primary education includes the lower and upper kindergarten; lower primary education covers Grades I to III; and upper-primary education from Grades IV-V. At the secondary stage, lower secondary education covers Grades VI-VIII and upper secondary education Grades IX-X. Grades XI and XII are pre-university, after which students can enter the tertiary system. Pre-primary education is wholly private and used by the middle and upper classes.

By the 1980s, a differentiated school system became well-established and served to track students from different social classes. The growth of subsidised private elementary education and the neglect of government schools resulted in a four-tier system with local body schools (LB) at the lowest level in terms of quality and demand, followed next by government schools, private aided (PA) schools and at the top level, private unaided (PUA) schools that are expensive and prestigious. The LB and government schools in rural and urban areas have trained teachers and provide free education.<sup>87</sup> These schools have a higher percentage of SC and ST children as well as more girls and children from first-generation school learners compared to PA and PUA schools. Sadly, their physical infrastructure is the poorest, often lacking basic facilities such as drinking water, classrooms, blackboards and toilet facilities. Where facilities are available, these are poorly maintained. Moreover, teacher

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87 PROBE (1999) has documented that free education is a misnomer. The cost of travel, uniform, books and other materials make education an expensive proposition for poor families.

absenteeism is a serious issue in LB and government schools. Within government schools, there is further segmentation between English-medium schools and vernacular language schools. The quality may be comparable, but recently demand has become far greater for the English-medium government schools. Private aided schools cater mostly to the lower and upper middle classes. The PROBE (1999) report shows that as a result of the poor quality and non-functioning of government schools there is increased demand for PA and PUA schools among the urban and rural poor. Studies show that although the preferred choice across all classes is for PA and PUA schools, the majority of children in rural areas, and a higher proportion of girls and SC and ST children, attend government schools (De et al, 2002). PA and PUA schools are either English-medium schools or teach English as a subject from Grade I, while the language of instruction in LB and government schools tends to be in the vernacular medium and English is introduced as a subject in Grade IV or VI (varying by state).

The system is also differentiated in terms of affiliations to different curricular and examination boards. At the top end are English-language schools affiliated to the CBSE (Central Board of Secondary Education) managed by the central government, CISCE (Council for the Indian Schools Certificates Examination) and IB (International Baccalaureate) examination boards, offering globally recognised syllabi and curricula. State government schools are under state-level examination boards. The prestige and value of a secondary school certificate from a state examination board is less than that of a CBSE or ICSE certificate. There were very few schools linked to IB examination boards and they mostly serve the elite and upper middle classes.

### *Higher education, economic growth and equality*

The Third Planning Commission (1962-66) noted with some concern the proliferation of universities and colleges and the problem of the educated unemployed. At the end of the planning period, 2.9 per cent of the total college age youth were enrolled in arts, science, commerce and law courses. However, employment opportunities for college graduates remained slack. The Kothari Commission recommended that at least 50 per cent of the students completing Grade X should be diverted to the vocational stream that would prepare them for productive employment and reduce pressure on the universities.

The Indian Institutes of Technology (IITs) and the Regional Engineering Colleges (RECs) exemplify the state's higher education policy of selectively recruiting and training the best engineers and scientists to help build the country's modern industries and infrastructure. The first five IITs were set up rather quickly between 1950 and 1961, with two more IITs established in 1995 and 2001. All the IITs were established with aid from donor governments and from UNESCO. There are seventeen RECs at present and these have separate entrance exams from the IITs. The IITs, followed by the RECs, remain the most prestigious higher education institutions. A recent *Times Higher Education Supplement* ranked IITs as the fourth best institutes for engineering and technology education in the world. Graduate

admission to the IITs is based on a national competitive exam set by an independent Joint Entrance Exam (JEE) committee, an exam that is taken by 200,000 students. Admission is limited to approximately 2,000 students spread across the seven IITs, giving an acceptance rate of only one in 100 (compared to graduate admission rates at Harvard and MIT of one in eight). The narrow selectivity crowds out other equally qualified students creating a super-elite class of graduates (Times Higher Education Supplement, 2005).

The reservation policy that allots 22.5 per cent seats for (proportionate to the dalit population) was ineffective and the numbers of dalit students and faculty in the IITs and RECs, as well as in other reputed public universities, are negligible. A strong urban and upper caste bias is evident in entrance examination passes, an outcome also of the proliferation of costly coaching classes concentrated in urban centres.

Higher education contributed to economic growth in two ways. The state could rely on a pool of qualified and specialised technical personnel to work on mega development projects such as large hydro-electric dams, defence and nuclear energy projects, telecommunications and manufacturing rather than having to import highly skilled labour. The large number of engineering graduates from public and private colleges made it possible for the government to establish public industries in key sectors such as petrochemicals, industrial and consumer goods, manufacturing and energy production. Scientists and engineers were trained to meet the projected needs of the formal economy and the hi-tech industrial sector and therefore contributed little to the technology needs of the rural sector and the urban informal economy. Second, the IITs and the RECs built a reputation as a source for high-quality technical manpower and created a demand for this labour market in developed economies.

Although the total number of scientific and technical workers is high compared to other developing economies, as a percentage of total population the numbers are rather low. As Tilak (2005) points out, a focus on the absolute numbers perpetuates the myth that India has a very large reserve of highly skilled manpower. India has only 1.2 scientists and technicians per thousand population and 2.5 research and development scientists per 10,000 compared to South Korea which has 61 scientists and technicians per thousand and 22 research and development scientists per 10,000.

The pent-up demand for engineering and medical degrees was channelled toward an expanding private sector in higher education. Private engineering colleges and diploma institutes grew steadily while the growth of public institutions stagnated. Private institutions received state funds and subsidies (including in the form of assets such as land at subsidised rates). The growth of private engineering institutes was most evident in the southern states of Tamil Nadu, Karnataka and Andhra Pradesh. The present educational success of the southern states is attributed to the anti-Brahmin movements in the south that emerged in the late colonial period and continued after independence (Omvedt, 1993). According to Omvedt (1993) and others, the political mobilisation of lower castes for social and economic mobility generated a demand for higher education, preferably professional education (also see Jaffrelot, 2003; Jeffrey, 2002). Non-Brahmin caste associations set up educational

trusts to fund schools and technical and professional colleges, significantly expanding educational access in the southern states (Kamat et al, 2002). Why similar developments did not take place in the northern states needs to be properly researched and explained.

Higher education's contribution to economic growth may be salutary, but its record on equality is weak. Less than 6 per cent of the total college-age population is able to access tertiary education. Tertiary education for a majority of the college-age population has been geared towards post-secondary vocational training courses, a policy direction that was recommended by donor agencies such as the World Bank and the Asian Development Bank (Tilak, 2001). The assumption was that high school drop-outs would be equipped with specialised skills before they leave the system and be able to seek gainful employment. It was also proposed as a viable strategy to develop technical manpower, and to build productivity and higher wages in predominantly agrarian economies (Psacharopoulos, 1986).

Despite efforts to divert students to vocational education, enrolments were only 1 per cent of total secondary education enrolments in 1970 with no improvement in subsequent decades (1.1 per cent in 1990) (Tilak, 2001). The ratio of vocational education enrolments to total secondary enrolments is considerably higher in China, Japan and Indonesia (10-15 per cent) and in South Korea, Turkey and Thailand (more than 15 per cent) (Tilak, 2001). Moreover, while the majority of the population is barely literate in English, over 50 per cent of all books and over 80 per cent of scientific and technical journals were produced in English (Altbach, 1992).

A recent government review documents that training objectives and curricula have not been effectively oriented to the goal of self-employment and enterprise training (Singh, 2001). In part the stagnation of TVET is due to the fact that it did not receive any attention from universities, and was seen as training for low skilled blue-collar work with no academic component. Effective links with industry were not developed either. A micro study in Gujarat documents that TVET has essentially served as a stop-gap option towards university education and the majority of students who graduate from TVET programs see university education as offering the best prospects and make persistent efforts to seek admission into university (Desai and Whiteside, 2000).

## INDIA IN A GLOBALISING ECONOMY

### *The problem of two Indias*

In his speech to the nation in 2000, Dr. K.R. Narayan, India's president from 1997 to 2002, describes the contradictions of globalisation for Indian society:

“We have one of the world's largest reservoirs of technical personnel, but also the world's largest number of illiterates; the world's largest middle class, but also the largest number of people below the poverty line, and the largest number of children suffering from malnutrition. Our giant factories rise from out of squalor; our satellites shoot up from the midst of the hovels of the

poor...Tragically, the growth in our economy has not been uniform. It has been accompanied by great regional and social inequalities...The unabashed, vulgar indulgence in conspicuous consumption by the nouveau-riche has left the underclass seething in frustration. One half of our society guzzles aerated beverages while the other has to make do with palmfuls of muddied water. Our three way fast-lane of liberalisation, privatisation and globalisation must provide safe pedestrian crossings for the unempowered India also so that it too can move towards 'Equality of Status and Opportunity'" (K.R. Narayan, 2000 cited in Dutta, 2002).

The concerns expressed by the late President Narayan are shared by sections of the intelligentsia, the NGO sector and Left political parties. Instituting welfare- and equity-oriented measures without stifling economic growth is the stated position of the present Congress-led UPA (United Progressive Alliance) government. Growth with equity and social welfare is not an entirely new perspective and reflects the dominant economic thinking of the pre-reform period as well. National political events of the two decades of reform from 1991 to 2004 appear to have convinced political parties of the utility of a 'growth with equity' approach to economic liberalisation.

#### *Impact of liberalisation on equality 1991-2004*

Poverty rates based on the national poverty line show only a slight decline from 38 per cent to 36 per cent but the World Bank's calculation of the percentage of total population who live on less than \$1 a day is 44.2 per cent, that is, 433 million Indians (World Bank, 2005). Inequality data in the post-reform period shows that income gaps have increased. It is reported that consumption of the top 20 per cent of the urban population has increased by roughly 40 per cent since 1989-90 and the consumption of the top 20 per cent in the rural areas has increased by 20 per cent in the same period. Consumption patterns of the bottom 40 per cent of the urban population show a relatively modest increase in per capita consumption of approximately 14 per cent since 1989-90 (Patnaik, 2003). The Indian economist, Patnaik (2004), documents that for the bottom 80 per cent of the rural population, nearly 600 million, per capita consumption has registered an actual decline since 1989-90. Their consumption is lower than what it was more than ten years ago. The decline in consumption and increase in malnutrition of the population is attributed to the decline in food crop production, especially the negative growth in production of coarse cereals and pulses that are the staple diet of the poor.

In proportionate terms, unemployment has increased from 22 per cent of the workforce in 1992 to 30 per cent in 2002 (World Bank, 2004). The official figure of 9.2 per cent (2004) accounts for only those registered with employment exchanges. The gap between daily status unemployment rate and usual status unemployment rate has increased with the second significantly higher than the first. This indicates an increase in casual and short-term employment among the labour force. Youth self-employment rates (15-24 years) show a substantial increase and may be the

combined effect of the decline in organised sector jobs and the government's new policy of special loans for youth for micro-enterprises.

Gross enrolment ratios in primary and secondary education have improved significantly from the pre-reform period. However, retention and levels of learning remain significant issues. The Approach Paper to the Tenth Plan (2002–2007) states that, "Out of approximately 200 million children in the age group 6-14 years, only 120 million are in school and net attendance at the primary level is only 66 per cent of enrolment." Of the 80 million children in the 6–14 age group who are either out of school or enrolled but not attending school, about 60 per cent are girls.

Literacy rates have not reached the expected target, but elementary education shows progress with 100 per cent gross enrolment rates (GER). Primary school enrolment rates went from 42.6 per cent in 1951 to 80 per cent in 1981. Enrolment rates for girls showed considerable improvement, from 24.9 per cent in 1951 to 64.1 per cent in 1981, but the gender gap also remained significant. Enrolment rates for boys increased from 60.8 per cent in 1951 to 95.8 per cent in 1981. The figures for 1991 are heartening with near 100 per cent gross enrolment ratios — 85.5 per cent for girls and 113.9 per cent for boys (Nayar, 2002). However, high drop-out rates and non-attendance showed that formal education had very little influence on the lives of majority of children. Primary school survival rate was only 38 per cent. More than half the number who enrolled in Grade I never made it to Grade IV, compared to China's survival rate of 70 per cent and Sri Lanka's rate of 90.8 per cent (Weiner, 1991). Net enrolment rates are usually said to be some 10-20 per cent lower than gross enrolment rates.

Support for basic adult education programs has declined over the last decade with priority being given to school education. This policy gap is unwise given that 62 per cent of women between the ages of 15-35 are illiterate (GoI, 2002). The northern Hindi-belt states continue to have lower literacy rates compared to the rest of the country. Collectively termed BIMARU states<sup>88</sup>, reforms appear to have had little impact on their low growth rate and poor social indicators. Table 9.2 provides a comparative picture of literacy rates by gender in selected states.

*Table 9.2: Gender Disparities in Literacy in Four States*

State	Female %	Male %
Bihar	34	60
Rajasthan	44	77
Tamil Nadu	64	82
Kerala	88	94

Note: Lower levels of literacy in the northern (backward) states, Bihar and Rajasthan compared to the southern states, Tamil Nadu and Kerala.

Source: Government of India, 2001.

88 BIMARU states are Bihar, MP, Rajasthan and UP and the term also translates as "sick" states in colloquial Hindi.

*Globalisation and education: policy issues and proposals*

Globalisation has not only intensified competition between nations on economic targets such as trade and foreign direct investment but has also led to greater scrutiny and comparison between nations on social development indicators such as child mortality, literacy and education, poverty and income inequality, access to housing, drinking water and so forth. Comparisons with China and East Asian economies on indicators of poverty, literacy and education are commonplace in policy, media and academic discourse today. Recent writings by economists and political scientists are noteworthy for their careful consideration of the ills of the Indian education system and analysis of its role in social and economic development. Research by Indian economists on education *per se*, and its role in national development, had been scarce. The domestic corporate sector has also become a vocal advocate for increasing expenditure on elementary education. Written by leading industrialists in the country, the Birla-Ambani report (as it is popularly known) affirms the new wisdom:

We have to fundamentally change our mindset — from seeing education as a component of social development to realising that it is a means of creating a new information society, resplendent with knowledge, research, creativity and innovation. It is not a social expenditure but an investment in India's future. The education opportunity before us is right, so funds have to be made available under any circumstances. Neglect of education will turn out to be India's nemesis (Prime Minister's Council on Trade and Industry, 2002; for source see Kamat 2007).

Achieving universal elementary education is expected to raise productivity and incomes and strengthen the domestic market, which the private sector sees as a condition for continued economic growth. The most extensive reform of school education is taking place through a national program called Sarva Siksha Abhiyan (SSA or *Education for All*) that is discussed below. The SSA aims to ensure that children of all ages receive an education, including overage and underage children, dropouts, and difficult-to-reach children. SSA is therefore a more ambitious and demanding program where the commitment is that all persons — child, youth and adult — should be able to benefit from education.

Wide-ranging reforms have been proposed in the higher education sector as well. The tenth plan by the University Grants Commission (UGC), an autonomous state body that regulates higher education, provides a detailed overview of reforms to improve quality of higher education that will allow public universities and colleges to be internationally competitive. These include performance-based grants, course credit systems and a 'cafeteria approach' that gives students greater flexibility and choice of courses, as well as a one-year 'utility oriented diploma/certificate' that students can complete along with their general education degree of three years. Improvements in course content, the use of ICT in teaching and the management of higher education, and support for professional development of faculty and administrators are among the several reforms to upgrade university education.



Unlike the SSA campaign for universal elementary education, the UGC tenth plan (2002-7) explicitly justifies reforms and increases in public and private sector investment as necessary to meet the challenges of globalisation.

The world will be looking for trained persons in all basic fields with a sound knowledge base in their core discipline and with the ability to adapt to new demands. The universalisation of the job market and the acceptance of Indian skills at a global level have opened up opportunities for the creation of new jobs internally. Moreover the service sector, which is on the rise, requires trained human power at various levels. Globalisation has thus spurred the demand for quality in education as well as increased the numbers of those wanting such education. There is need to create more opportunities for better education for the large number of students who want to be a part of the new economic revolution (University Grants Commission, 2004).

In contrast, the policy discussion on universal elementary education emphasises the intrinsic value of basic education for overall human development. There are positive externalities to elementary education, through improved health, lower infant mortality rates and enhanced opportunities for participation in public life. These are of intrinsic value to a society and therefore basic education must be treated as a non-negotiable right of all people (Sen, 1999; Sen, 2004). However, there is growing concern that the focus on basic education is too limited in the current economic scenario and does not adequately consider the education and skill requirements to enhance productivity and incomes in a changing economy. The emerging scenario is one where reforms in the higher education sector are likely to be better coordinated with economic opportunities while the basic education sector remains poorly linked to opportunities for economic and social mobility. The implications of this disjuncture are extremely significant given that higher education serves a relatively small section of the population while the majority of the population are expected to access only basic education. This issue is discussed in more detail in a subsequent section on the relevance of post-secondary education for equality and growth in the new economy. The remainder of this section examines the strengths and limitations of policy reforms that have acquired salience in the context of globalisation.

### *Education for All and universal elementary education*

The optimism reflected in the constitutional directive of 'free and compulsory education up to the age of 14' remains a distant dream after almost six decades of education planning and investment. Neighbouring countries such as Sri Lanka, Malaysia and Thailand with comparable resources to India have managed to match the performance of developed countries in this sphere. The ability to attract markets and foreign investment is seen as severely constrained because of a largely illiterate or semi-literate population. The 1991 Census of India shows that 64 per cent of males and 39 per cent of females are literate – an increase of 17 per cent and 14 per cent respectively from the 1981 census (cited in Weiner, 1991). These increases seem significant, but India's overall literacy rate of 40.8 per cent lags behind other developing countries such as China (72.6 per cent), Sri Lanka (86.1 per cent), and

Indonesia (74.1 per cent), all of which have per capita incomes comparable to India's (Weiner, 1991).

Literacy rates for scheduled tribe (ST) communities increased from a low of 11.3 per cent in 1971 to 29.5 per cent in 1991. Rates were better in the northeast states of Mizoram and Nagaland than in tribal majority states. Literacy rates for ST populations are worse in states with a minority tribal population such as Madhya Pradesh, Andhra Pradesh and Rajasthan. Andhra Pradesh has the lowest literacy rate for tribals at 17.1 per cent in 1991. Madhya Pradesh figures are similar, moving from 7.6 per cent in 1971 to 10.6 per cent in 1981 and resting at 21.5 per cent according to the 1991 census data (Sujatha, 2002).

Enrolment increased significantly during the 1990s, and a 100 per cent gross enrolment rate in primary education was achieved in 2003. Scholars have questioned the data on gross enrolment rates and say micro-studies in specific states and districts do not bear this out (Dreze and Sen 2002; Kingdon 2002 in Kamat 2007). Regardless, the official position is that universal access to primary school is more or less assured and targets are being met. But official data also shows that high drop-out rates, low levels of learning and achievement, inadequate school infrastructure, high rates of teacher absenteeism and large numbers of teacher vacancies are endemic problems in government schools in comparison to private aided and unaided schools.

The government launched the Sarva Shiksha Abhiyan (*Education for All Campaign*) in 2001 as a comprehensive mission to transform the primary school sector through institutional, administrative, fiscal and curricular reforms. The objective of the SSA is to provide quality, useful education for all children and close gender and social gaps. The campaign also includes special programs and provisions such as the Alternative and Innovative Education (AIE) scheme, the Education Guarantee Scheme, and bridge schools to reach out to child workers, migrant children, street children, children in remote habitations and other typically excluded populations. The goal is universal retention by 2010. The central government proposes to work in coordination with state governments and local communities. Some of the unique features of the reform are community-based planning where the local area will serve as the unit of planning, ensuring a sustainable financial partnership between the central and state governments, and a focus on minorities.

The Central government has increased allocations for elementary education to ensure the success of this campaign. The 2 per cent education CESS that is expected to generate Rs. 400 million per year will also be used to fund the SSA. The budgetary commitment for SSA from the Central government is a departure from previous reform efforts, which relied on state and/or donor agencies to provide most of the budget and thus failed to achieve large-scale, sustainable reform. Further, allocations will be made only after each district submits a District Elementary Education Plan that outlines 'all investments being made in the education sector, with a holistic and convergent approach' (Government of India, 2004; for source see Kamat 2007).

Early studies indicate that states are rushing to achieve enrolment targets but providing substandard education in the process. States are hiring para teachers or

education volunteers on a contract basis; they are not certified teachers and are paid a modest honorarium. The concept of a para teacher or education volunteer was initially proposed as an aide to the regular teacher in single teacher schools. Official data shows that the trend is to hire para teachers or part-time teachers in place of regular full-time teachers (Govinda and Josephine, 2005). Thus a proposal that was put in place to mitigate the high student-teacher ratio and provide support for single teacher schools in rural areas is being misused to cut costs. In part, the severe resource constraints faced especially by backward and already poor states such as UP, Bihar and Orissa press them to adopt cost-cutting measures to fulfil enrolment targets. As a result any levelling off in the achievements of educationally backward states (clustered in the north) and the educationally forward states (clustered in the south) is likely to be superficial and transitory.

Dreze and Sen (2002) document that though percentage growth rates in recurring expenditures such as teacher's salaries have risen through the decades, in real terms the percentage expansion of number of teachers has actually fallen and shows no signs of reversing despite the recent budget increases to elementary education. The policies of the advanced Asian economies are instructive here. Their teacher-pupil ratios, at 40 plus in primary education, were as high as those of other developing countries. Yet the levels of achievement of school children in the advanced Asian economies have been very high, comparable to those of children in OECD countries. According to Mingat (1998) the high levels of learning were achieved because teachers enjoyed professional status and higher salaries relative to average incomes in those countries. The higher socioeconomic status of teachers in these countries was reflected in higher teacher quality despite more pupils per teacher. Thus while the renewed emphasis of the Indian government is on achieving universal primary education, the tendency to compromise on critical aspects such as hiring qualified teachers at regular salaries is likely to jeopardise the fundamental objective of comprehensive and quality primary education provision for all.

### *Decentralisation of education*

A constitutional amendment in 1993 gave extensive decision-making powers to local communities over village development projects, including education and health services. The idea of village-level governance is a radical reform aimed at deepening democratic participation while also reducing wastage and inefficiencies (for example, absentee teachers on the state payroll). The high rates of enrolment and significant improvement in retention rates at the primary level are attributed to the success of this policy, particularly in Madhya Pradesh and Kerala where local governance has received exceptional state support (Ramachandran, 2004; Mukundan and Bray, 2004).

Notwithstanding the success stories, the overall picture that emerges is a troubling one. Evaluation studies show that decentralisation has created an excessive bureaucracy at district and village levels and has increased incidents of corruption

and elite capture of public resources (Vasavi, 2004).<sup>89</sup> The ostensible goals of decentralisation and state devolution – to improve accountability, transparency, efficiency and equality – may prove to be difficult to accomplish in a decentralised context, as we saw in the case of China (see Chapter 2), and may thus contrast with the successes of the more centralised systems of the East Asian Tiger economies (see Chapter 1). Decentralisation demonstrates the state’s willingness to share powers and typically adds to the political legitimacy of the State. Where decentralisation results in unchecked corruption and elite capture not only does it erode popular support for decentralisation but it also undermines the legitimacy of the State (Jhingran 2004).

Dreze and Sen (2002) argue that the assumption that decentralisation results in local democracy is naïve and misplaced, particularly in the context of an India characterised by sharp inequalities, feudal relations and community power structures that are deeply prejudicial towards women and low caste members. Mansuri and Rao’s (2004) study of anti-poverty programs in developing countries similarly concludes that local participation of affected groups is high in communities that are more homogenous and egalitarian. Unfortunately, as they point out, participation by the poor is most needed in communities that are fractured by class/caste hierarchies and are ruled by elite politics. Similarly, in his study of decentralisation in economically less-developed countries, Fiske concludes that “the impact of decentralisation [on spending for education] is as much a function of context and external economic and political conditions as it is a function of decentralisation itself” (1996: 24). For example, Narayana (2005) found that in Kerala the poor and the socially disadvantaged show high levels of participation in local governance while in Tamil Nadu socially disadvantaged groups are well represented in local decision-making but the poor are excluded. The benefits of decentralisation therefore cannot be realised without the support of effective social policies that address endemic poverty and hunger, social security, land redistribution, and gender and caste inequalities (Ramachandran and Saihjee 2004).

### *Privatisation of education*

While private unaided schools, primarily at the elementary level, have been on the rise since the eighties, recent studies show that the number of private aided and unaided schools has exploded and has led to greater market segmentation and increased competition for access to quality education.

State governments have liberalised criteria and procedures for establishing private elementary schools, though unaided secondary schools remain more tightly

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<sup>89</sup> Transparency International (2005), a non-profit organisation that monitors corruption in different countries, has produced a damning report on the staggering amount of corruption in the education sector in India. Their estimates of bribes paid for education services totalled Rs. 400 million per year, the same amount that the 2 per cent education CESS is expected to raise! This figure does not include embezzlement and diversion of educational expenditure for non-educational purposes; these also appear to be widespread problems in certain states.

regulated. Schools have therefore sprung up in an *ad hoc* manner and are of widely differing quality. There is an increase in private sector provision (mostly aided schools) in rural areas as well, but these schools are of lower quality than private (aided and unaided) schools in the urban areas. Lower quality 'budget schools' cater to the urban and rural lower middle class and working poor. Inadequate regulation by the state allows private (aided and unaided) schools to hire unqualified teachers at lower salaries with no job security. In addition to tuition fees, schools supplement their revenues through 'donations', hidden fees and extra charges for co-curricular activities.

Despite the differential quality and costs of private schools, public opinion appears to favour private schools. The government schools are simply written off as uniformly dreadful and only the very poor send their children to government schools, though parents in rural and remote areas where private schools may not exist send their children to the local government school. Enrolment rates in government schools are therefore in decline compared to enrolment rates in private schools. Studies show that poor families increasingly opt for private schools, but this does not indicate higher incomes and affordability, rather a willingness to bear additional costs in the quest for quality (PROBE 1999; De et al., 2002). The state policy of benign neglect of government schools and freely handing out licences to private schools is indicative of the implicit middle-class bias in education policy and the lack of commitment to universal elementary education. In the urban centres, competition for reputed schools is fierce and coaching classes that train three- and five-year-olds for admission tests to private (aided and unaided) schools are common. The stress on students has increased dramatically to the extent that anxiety, depression and suicide among students due to uncompetitive marks in state examinations appears to be on the rise.

### *Language policy and inequality*

The preference for English-medium schools is evident even among the working poor who are opting out of government schools that typically offer English as a subject only in Grade VI (though this varies by state). Instead they choose private aided schools that offer English as a subject from Grade I or English-medium schools that teach all subjects in English. Munshi and Rosenzwei's (2003) detailed study of returns to English language skills before the reform period and after shows that there has been a dramatic increase in returns in the post-reform period. Their data on school choice and income for boys and girls show that for given years of schooling in 1980, men who had attended an English medium school earned 17 per cent more than those who had attended a Marathi-medium school. In the post-reform era this gap rose to 22 per cent. For women, the same figure rose from practically zero prior to reforms to 25 per cent in the post-reform period. The ratio of upper-class males to lower-class males trained in the English language was 8 to 1; for women this ratio was about 15 to 1. Thus, differential access to English-medium schools in the post-reform period is likely to result in income inequality.

Studies show that students who have passed Grade X from government schools are often unable to read or write in English. The demand therefore from parents is that government schools should introduce the teaching of English language from Grade I so that English proficiency standards are on par with middle-class students. Some state governments, such as that of Rajasthan, have responded to the pressure from parents and introduced English as a subject in Grade I in all government schools. The controversy over language policy in government schools and the poor proficiency of its graduates has become a national issue. The debate, however, is divided between the intelligentsia who claim changes in school policy will lead to the demise of regional languages and parents from poor and low-caste backgrounds who claim that their children are being denied a fair chance in the new economy because of the government's language policy. The danger is that the issue will be polarised along caste lines. Meanwhile the growth of the service sector and the consequent demand for English proficiency has led to the unregulated growth of private coaching classes that focus on conversational English skills. The emphasis on rote learning and examinations has resulted in low proficiency not just in the English language but in regional languages as well.

#### *Regulating higher education*

The number of colleges and universities across the country has risen from 565 and 25 in 1953 to 15,600 and 311 respectively in 2004. Simultaneously the number of students in higher education has risen from 230,000 to 9.28 million. India produces over 2.5 million university graduates per year. Approved engineering and management colleges number over 4,000, with an annual intake of 6.7 million students. Most of the growth in higher education institutions has been in the private sector. Growth of the private sector was slow in the 1980s compared to the increase in number of colleges in the last 15 years. Government aid to private institutions was as high as 45 per cent of total expenditure for higher education in 1990-91 (Tilak 2001). At present, there are more private unaided colleges than aided colleges by a large margin, and their exorbitant fees are a deterrent to even middle-class students. A new category of engineering and management colleges called 'self-financing' colleges has come into operation in the southern states. The growth of private investment in higher education shows that this sector is now seen as profitable business.

A troublesome trend that began in the 1980s is that politicians who hold elected office are also investors and part owners of private colleges, causing a potential conflict of interest between those who are responsible for regulating the sector and those who profit from the lack of regulation. In response to writ petitions, the Supreme Court regulated the fee structure and the examination system, and enforced the reservation policy for SC and ST students even in private unaided colleges. Private unaided colleges were also required to maintain a certain quota for students on a merit basis and admit them at reduced fees. These policies have become controversial and the Supreme Court recently ruled that private unaided engineering and medical colleges are not required to fulfil any government quota. According to a

recent news report, Karnataka has 27 medical colleges of which 24 are private unaided, 39 dental colleges of which 38 are unaided, and 119 engineering colleges of which 107 are unaided (*Deccan Herald* 2005). The ratio of aided to unaided colleges provides an indication of the potential impact of the recent Supreme Court ruling on students who have little option but to access private institutions. The ruling out of 'quotas' in private institutions has led to student protests and is also opposed by the legislature.<sup>90</sup>

In 1997, the government recommended the reduction of state subsidies to 'non-merit' goods by 50 per cent. In the list of merit and non-merit goods, secondary and post secondary education were listed as a non-merit goods and elementary education as a merit good. This new classification as a 'non-merit' good marks a different understanding of the role of education from the pre-reform period in which higher education was seen as a public good. The rationale for this policy is that subsidies in higher education accrue primarily to the middle and higher income groups and are therefore an inefficient use of scarce resources, and secondly, private returns in this sector are higher than social returns. The macro-economic policies of liberalisation that call for greater fiscal efficiency in state expenditures are used to justify the cuts in subsidies. Reductions in subsidies have been contested as inadequate and short-sighted. Both empirical and theoretical research illustrates that market imperfections and consumer ignorance make investment risky and private returns uncertain. Second, externalities are considerable in the form of human development and economic growth (Tilak 1997; Levin 1987). Cuts in public subsidies to higher education are coming at a time when the productivity of knowledge is seen as the primary basis for competitiveness in the international economy (Robertson, Dale, Tikly and Novelli 2006 – for source see Kamat 2007; Marginson 2000).

To ensure the competitiveness of higher education in a global market, the Indian government's proposal is one of targeted investments. Concerned that its star institutions will be unable to compete in the 'knowledge economy', the tenth plan proposes to invest in 25 universities across the country that have 'potential for excellence' (UGC 2004). These universities, as well as colleges that have established a reputation for quality education, will have autonomy to develop their own curricula, conduct their own examinations and award joint degrees with affiliating universities. In many ways, this continues the elitist policy of post-

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90 At the time of going to press, the Central government has proposed a draft bill that supports 27 per cent reservation of seats in all centrally funded institutions of higher education for Other Backward Castes (OBCs) bringing the total percentage of seats reserved for minority groups to 49.5 per cent (this includes the existing 22.5 per cent reservation for Scheduled Tribes and Scheduled Castes). If passed, the new reservation bill will affect admissions in premier medical and engineering institutions in the country, including the prestigious IITs as well as premier universities such as Delhi University. The bill is supported by all political parties as a way to ensure fair representation of backward castes in higher education but there is also opposition from students, faculty and the corporate sector arguing that it will compromise excellence. The government is revisiting the draft bill to satisfy all sides of the debate.

independent India where a few institutions are nurtured to be the best rated institutions in the world while the rest offer substandard education.

Research on higher education shows that Indian universities and colleges, including the star institutions, will not be able to withstand competition from foreign education institutions (Bhushan 2003; for source see Kamat 2007). Certainly, the need to improve the standards of quality, relevance and efficiency of public higher education institutions is an issue that predates GATS. While these are laudable goals, a legitimate fear is that the environment of global competition and GATS regulations will force public higher education to adapt to market demands and forsake broader national interest. One can already see this in the growth of private institutions that offer only a narrow range of professional courses such as finance, management and BPO training.

### REASSESSING REFORMS IN THE SCHOOL SECTOR

The issues outlined above with respect to *Education for All* (SSA) and elementary education policies have generated a public debate on the need for more radical measures that tackle the structural inequities of the system.

#### *The demand for a common school system*

Indian educationists are calling for a common school system. They point to the historical development of common school systems in the developed countries of Europe and North America which were able to provide universal, standardised education and build a cohesive national identity in a relatively short period (Sadgopal 2000, 2003). In their draft position paper, the Committee on Work and Education appointed by NCERT (National Council for Educational Research and Technology) issued a strong warning to the government of the risks involved in refusing to implement a common school policy:

Let us recall that no developed or developing country has ever achieved UEE without a strong state-funded Common School System with Neighbourhood Schools. India is not going to be an exception either to this historical experience. And without an effective and universal programme of work-centred education, it is unlikely that UEE (and later Universal Secondary Education too) would succeed! The proposed radical departure from the present educational system would not be obviously possible without building up a nation-wide social movement in its support (NCERT 2005:318).

Whether the government will continue with the present structure of education or whether civil society groups will be successful in pressuring the government to implement a common school system remains to be seen. Clearly government, civil society and the private sector are convinced that the country's ability to move from an emerging market to a developed economy depends fundamentally on fulfilling the constitutional objective of universal school education.



*Secondary and post-secondary education*

A second, related concern is that the focus of the present policy on elementary (mainly primary) education does not take the long view on human capital needs, skill development and social development that is required in the global economy. Ramachandran (2003) warns that 'linking up with the rapidly changing economy remains the biggest challenge' and argues for a comprehensive approach to education reform that is not limited to achieving universal elementary education.

[U]nless the government is willing to invest in quality, children are not likely to be equipped to compete with the better-off sections of society. The academic rigour, time and environment necessary for children to move from primary to secondary to professional education are still beyond the reach of poor children. At best, most programmes for the poor go up to the secondary level. Even vocational education and training in livelihood skills are beyond their reach. The forward linkages necessary to make primary education a means to livelihood security are yet to be created. Creating exit points at different stages, especially between Classes VIII and XII, would enable children to move on to livelihood and life skills oriented programmes. (Ramachandran 2003: 26).

The NCERT committee on Work and Education arrives at a similar conclusion on the changing employment scenario and the need for expanding post-secondary education:

There is no option for India but to include universalisation of education up to at least Class X (extendible to Class XII) in its political agenda in the foreseeable future in order to build an educated workforce in consonance with the needs of a democratic society and the fast-growing globalised national economy (NCERT 2005).

The experience of East Asian countries demonstrates the importance of secondary and post-secondary education. The development of quality secondary education and higher education was a conscious strategy of the governments of East Asian countries to link human capital investments with economic growth targets (McKay and Mills 2004; Jones 1999). The 'first wave' Tiger economies, South Korea, Taiwan, Singapore and Hong Kong, followed a more sequential process of prioritising quality basic education (that included lower secondary) followed by higher secondary education and tertiary education. In the 'second wave' Tiger economies, such as Malaysia, Vietnam and Thailand, a policy of compulsory elementary and secondary education was pursued simultaneously and was important for broad sections of the population to benefit from rapid industrialisation and high-wage jobs (Jones 1999).<sup>91</sup> South Korea and Taiwan relied on private sector investment at the secondary school level while Singapore's secondary school system

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91 According to Jones (1999), the strategy of investing in secondary education paid off only partly in Thailand. They were successful in increasing the transition rate from primary to secondary from 50 per cent in 1990 to 85 per cent by 1995 but the rate of completion was not as high as expected and the education reforms were a little too late and did not anticipate the economic boom and the inflow of foreign investment. Policy analysts forecast that by 2010, a high proportion of the labour force in Thailand will only have primary education.

was state funded (Mingat 1998). Studies show a correlation between investment in post-primary education and job growth, higher wages and improved standard of living (Green 1997). In assessing the relevance of East Asia's education policy for Africa, McKay and Mills (2004) conclude that no macro-economic policy can succeed without investing in quality secondary education and training.

### *Addressing regional imbalances*

The role of macro-economic policies — whether neo-liberal or interventionist — highlights the importance of the State in two areas which have received inadequate attention from policy: regional imbalances and the nature of the labour market.

Regional disparities have increased in the post-reform period. States with better infrastructure in power, transport, communication, education and health facilities attract private capital and new industries and generate productive employment. Inequities within states have also increased because of the concentration of infrastructure, educational and other resources in urban areas. In general southern states that invested in education at an earlier stage are doing better than northern states. A good example is the IT industries that are concentrated in states that have reputable and well-developed higher education sectors. Bihar, for instance, has less than one engineering college for every ten million people in the state while Tamil Nadu has more than forty engineering colleges for every ten million people.<sup>92</sup> According to Finance Minister Ahluwalia (2004), regional imbalance is a greater problem in India than in China where regional disparities have also worsened in the reform period. This is mainly because in China the benefits of liberalisation have flowed to the most heavily populated regions, the coastal areas, whereas in India, the most populous states are in the hinterland, and with the worst social and economic indicators they are unable to attract investment.

The data on inter-state disparities display an alarming picture:

Five major states, namely, Gujarat, Maharashtra, Tamil Nadu, Andhra Pradesh and Karnataka, that together account for less than one-third of our population, accounted for almost two-thirds of the private investment proposals over the last 10 years since August, 1991. The same set of states benefited from over 60 per cent of the commercial bank credit and financial flows from national level financial institutions like IDBI, IFCI etc. In contrast, another set of seven major states, viz. Uttar Pradesh, Bihar, West Bengal, Madhya Pradesh, Rajasthan, Orissa and Assam together accounting for 55 per cent of the population received less than 30 per cent of the private investment proposals and a similar share of bank credit and other institutional finances during the last decade. In terms of per capita incomes, the gap between poorer and richer regions has grown in recent

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92 Bihar is India's second most populous state with 83 million people and Tamil Nadu is the sixth most populous state with 62 million people. Numbering almost 300, Tamil Nadu has the largest number of recognised engineering colleges in the country.

years. The per capita income in Maharashtra was 3.8 times that of Bihar in 1998-99 as against 2.8 times in 1990-91 (Kurien 2002).

There is concern that the increase in regional disparities could lead to social conflict and internecine violence. Liberalisation has increased the autonomy of state governments to negotiate investment and aid agreements with multinationals and lending agencies. Conversely, the redistributive capacity of the central government to mitigate imbalances in favour of poorer states is curtailed. The danger of polarisation and conflict between the northern backward states and southern forward states is not an unimaginable prospect.<sup>93</sup>

#### *Changing labour market conditions: implications for education*

Generating productive employment for a wide base of the population is an essential component of economic growth and equality. Neo-liberal reforms, including reduced state expenditure, withdrawal of rural credit and the privatising of public industries, have tended in the opposite direction. More than a decade of market-oriented reforms in the economic sectors have led to a dramatic *decrease* in the rate of employment in both rural and urban areas (Ghosh 2004). This situation requires urgent policy intervention to create effective linkages between education and the world of work. Almost 70 per cent of the total employment opportunities generated over the next ten years is expected to be in the service sector (World Bank 2005). The exponential growth of IT-related services and, to a more limited extent, hospitality services are the main reasons for the rapid growth of the service sector in the last decade. This trend is of concern because a majority of India's workforce is in the agricultural sector. India's labour force by occupation is 60 per cent in agriculture, 23 per cent in services and 17 per cent in industry (GoI 2002). As Table 9.3 below shows the agricultural sector's share in GDP is in inverse proportion to the number of people employed in this sector and has reduced since liberalisation.

*Table 9.3: Share in Gross Domestic Product by Sector*

sector	As Percentage of GDP	
	1984	2004
<i>Agriculture</i>	35.2	21.2
<i>Industrial</i>	26.2	27.0
<i>Manufacturing</i>	16.1	16.1
<i>Service</i>	38.7	51.7

Source: Ahluwalia, 2004.

<sup>93</sup> It is revealing that student protests against proposed reservations for OBCs in central government institutions are concentrated in Delhi and some northern cities and are absent in the south. Though systematic data is unavailable, this indicates that higher education is accessed more broadly by a cross-section of caste groups in the south than in the north.

*Informal sector labour*

Studies also show that the informal sector manufacturing and trade that typically provided jobs in rural areas are moving to cities and large towns. As informal sector manufacturing, such as agro-business and processing, becoming 'modernised' and export-oriented, these industries are seeking an educated workforce in urban areas. The low level of education and low skills of rural workers, where up to 90 per cent of women are illiterate, excludes them from manufacturing jobs just as these jobs are becoming more productive with higher remuneration (Dev 2002). Several economists recommend diversification of employment opportunities in rural areas but this diversification will not have the intended effects if rural youth are not educated and well-trained (Dev 2002). Rural infrastructure and credit facilities also need to be provided in a systematic manner.

*Organised versus unorganised labour*

Employment in the organised sector has also declined since 1993 and in 2000 accounted for only 8.3 per cent of total employment, the private sector share being only 2.5 per cent. The scant increase in numbers employed in the private sector from 1990 to 2000 calls into question whether further deregulation of labour laws (hiring and firing, minimum wages and so forth) will actually lead to increases in the private sector workforce, a solution that is proposed by advocates of market-oriented reform (Ghosh 2004). Data show that the unorganised sector expands under globalisation (subcontracting and "flexible" labour). The state therefore needs to ensure better working conditions for the unorganised sector through provision of social security, health care and skills training. Micro-studies suggest that much of the increase in women's employment is attributable to the growth of subcontracting and home-based production that are typical of export production processes in the global economy (Ghosh 2004). Construction, transport and mining, the fastest growing industries, are generally male-dominated areas of work. Therefore strengthening manufacturing and trade in rural areas is important for women's employment outside the farm sector while providing them with appropriate skills and training for these areas.

*Child labour*

The official incidence of child labour appears to have declined from 1980 to 1997; however, the figures may be misleading since they tend to represent the full-time urban child workers rather than the rural child workers who constitute the majority in India. Research in South Asian countries show that higher GDP does not translate into better wages or improved working conditions, and literacy or primary schooling does not help overcome the demand or supply of child labour in a largely poor economy in which export industries, subcontracting and home-based production dominate (Dev 2000). For instance, between 1991 and 1993 Gujarat received the second largest inflow of foreign investment, an impressive 15 per cent of total

foreign investment, in the country. However, a significant part of the new investment was in industries that employed children. A micro-study of 13,000 child workers in the city of Bhavnagar showed that 17 per cent were going to school while working. Although 50 per cent of children had completed primary school these did not yield any income gains and moreover most were illiterate (Swaminathan 1998). Large-scale studies that explore the relations between economic reforms, quality of schooling and child labour are needed in order to produce a national perspective on this issue.

The experience of developed economies in Europe and Asia shows that schooling has to be of sufficient quality and number of years to abolish child labour. In addition, labour laws have to be stringently applied and social security and decent working conditions in the unorganised sector must be guaranteed. Evidence from advanced industrialised countries shows that enforcement of quality free and compulsory primary and secondary education needs to go hand in hand with improving the social net and working conditions for poor adults in order to end child labour.

### CONCLUSION

The study of education and economic reform in India provides interesting insights into the re-organisation of the nation-state, the influence of regional politics and the importance of democratic culture in the process of globalisation. In the face of global market forces, the Indian state is not declining in influence but is instead playing an authoritative role in the economic reform process. The role of the state in planning and directing economic reforms is not without new and difficult challenges. The rise of political parties that are responsive to regional politics and to their own constituencies presents a new challenge to governance and policymaking. The Indian state is a conglomeration of political interests and actors, and policymaking requires a great deal of negotiating across multiple and competing political groups. Decentralisation of governance to local bodies and district levels requires further negotiation and consensus building among village-level, district-level, regional and national interests and objectives. The Indian state is less able to function as a single behemoth and instead has a more complex, differentiated and contradictory character than, for instance, the Chinese state.

Pro-liberalisation pundits tend to see this as the downside of the Indian state and a problem of 'too much democracy' being a barrier to market-friendly reforms. The argument is often made that the federal democratic character of the Indian state is the main culprit for why India is unable to implement reforms as efficiently and rapidly as China. Another more optimistic view is possible – namely, that multi-party coalition politics serves as a protectionist measure against rampant liberalisation and privatisation measures that in the short run may lead to higher economic growth but not without extracting a huge social cost that ultimately will have serious political ramifications. Increases in income inequality, high rates of extreme poverty and food insecurity and rising sectarianism within the country

speak to the importance of an integrative reform process that considers welfare and equity goals.

Further, there is a surprising degree of consensus among the various political parties on the education reforms necessary for growth and equality — be it expansion of the private sector in education, strengthening the competitiveness of higher education and decentralisation of elementary education, to mention some of the prominent reforms implemented in the education sector in recent years. The concern, however, is that measures which ostensibly promote equity in education — such as decentralisation of elementary education and quotas in higher education — are populist in nature and ultimately only bolster the *perception* that the state is ‘equitable and caring’ while doing little to actually reduce educational inequities. They may, as suggested here, even increase them.

A related concern is that the potential impact of the reforms on social cohesion has not been seriously considered. For example, in the Indian context, decentralisation and community control of schools may end up strengthening caste-based affiliations, with wealthier and more powerful caste groups in a village controlling the local government school. It may also provide access to Hindu nationalist sympathisers to influence the curriculum and pedagogy in public schools. Similarly, privatisation of higher education is predicted to encourage caste-based education trusts that will serve primarily students from their own community with scholarships and loans; they may even build their own colleges and universities thereby strengthening caste identities and exclusivities.

A final observation is that the Nehruvian development policy that gave priority to higher education, especially in the fields of science and engineering, generated unanticipated benefits. The ‘elite bias’ of India’s leaders is today considered as visionary policy in appearing to ‘anticipate’ globalisation. The evidence, however, cautions that such celebrations may be short-sighted. For it is only a slim minority that has gained from the knowledge-based economy and a vast majority who find it impossible to be part of the new growth economy, thanks to poor educational infrastructure at all levels. Correcting this imbalance in the economy will need more than the palliative measures of 100 days of state-provided rural employment or an increase in quotas in government colleges and universities.

In the short run, India is well positioned as an emerging economy with high growth potential. The challenge facing the country is to move from a position of an emerging economy to a developed economy in which growth is more even across sectors and the opportunities and benefits enjoyed by a tiny middle class are extended to the lower middle classes and the poor. In order to achieve this, quality basic education for all must become a reality while also building on the accomplishments of the tertiary system. The need for a strong state that is able to balance growth-oriented policies with genuine equity-related measures cannot be overestimated.

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## What Can Policy Makers Learn from the Australian Disadvantaged Schools Programme?

*Pat Thomson*

### INTRODUCTION

The Australian Disadvantaged Schools Programme, the DSP, as it was known, ran from 1973 to 1996. It remains the second longest running anti-poverty in education programme in the world. *Headstart*, the early childhood support program established by the United States Congress in 1965 is the oldest and, unlike the DSP, is still in existence.

In this chapter I look at the DSP, its origins, progress and its demise, and I consider what can be learnt from it. This is a policy sociology analysis, but it is one that draws on personal experience as a school principal and as a policy activist, as well as being based in research in schools undertaken in South Australia in the late 1990s (Thomson 1999, 2002). My aim is to contribute to thinking about future policy agendas: the chapter highlights a set of issues that continue to bedevil education systems which aspire to making a difference to the depressingly constant unequal educational trajectories of working class children and young people.

The first section tells the story of the DSP, the second focuses on achievements and those things that were key to supporting and changing the schools that served the poorest communities in the country while the third and final section provides some pointers for future agendas.

It is important before beginning to signal some important features of the Australian education system.

Australia is a federation of states. The making of social and economic policy in Australia is embedded in the geo-politics of federal-state relations. The constitution, which underpins the Australian federation explicitly, gives the states the responsibility for schooling. The Commonwealth has a mandate for training and higher education and for the welfare of Aboriginal and Torres Strait Islander peoples, newly arrived immigrants and refugees in particular, and for those suffering hardship in general. The school system in Australia consists of three sectors: the public or state schools, the Catholic school system, and independent schools.

Any national schooling strategy, including the DSP, was not only subject to the ongoing tussle between states, and between states and the Commonwealth, but also had vernacular interpretations in each state. Furthermore, from the mid-1960s

onwards, there was a continuing political struggle over the expenditure of federal public money on private schools, that is, Catholic and independent schools.

### THE LIFE CYCLE OF THE DSP

The DSP went through four overlapping and blurred phases: birth, taking shape, growing up and running out of steam. These are discussed below.

#### *Birth*

In 1973 the first post-war Labor federal government was elected. Committed to a progressive socially-oriented politics, it initiated a broad and integrated strategy to attack social inequities which existed amid relative prosperity. A federal Schools Commission was charged with the responsibility of dealing with education and its fundamental class-based inequalities. The first report to emerge from the Schools Commission proposed financial assistance to private schools, intensive capital funding of state primary and secondary schools and the introduction of compensatory financial provisions to targeted groups of students who suffered deprivation and disadvantage, regardless of the sector in which they were based (Karmel 1973).

At around the same time most states, influenced by moves in the US and the UK to address educational inequality via compensatory policy strategies, queried the benefits of a two-tier system of schooling which divided children at the end of the primary phase into those destined for technical education and work, and those allegedly more suited to academic study. The classed nature of this system belied its rhetoric of meritocracy. Educational policy makers searched for solutions which, in most states, meant the abolition of technical high schools and the formation of comprehensives.

The DSP represented a coming together of two strands of policy concern:

1. national concerns – with poverty, mopping up the effects of the shift to a manufacturing-based economy, meeting increasing demands for better-educated workers, and ensuring that increasingly mixed working-class neighbourhoods were socially cohesive; and
2. concerns in the states – making limited funds meet escalating demands, making schooling less divisive and more comprehensive and giving more children ‘equal opportunities’.

The DSP focused on schools as the unit of change – not children, as did the Head Start programme in the US. It eschewed a simplistic focus on outcomes that might be shifted by an injection of funds in a mechanistic cause-effect relationship. It created a remit for changing the relationship between schools and their communities. It provided funding to the bottom tier<sup>94</sup> of Australia’s school-age population, regardless of school sector and location.

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<sup>94</sup> This was measured using indicators of disadvantage, with census and welfare data about family income used to target specific schools with high concentrations of needy children.

The DSP also had mixed mandates: it was to *compensate* by having schools provide what families could not afford, it was also to *innovate* while supplementing basic entitlements, namely buildings, equipment, tools, techniques and teachers. It was to provide *equal opportunity* as well as to dramatically *change outcomes*. The tensions — between compensation and emancipation, whether it was schools, families or social structures at fault, between changing society or achieving a better distribution of credentials, the balance between teacher professional development, school reform and better infrastructure — rippled through the programme throughout its lifetime.

### *Taking shape*

The DSP operated through Catholic and state school committees in each state and a national non-government school DSP committee. There were also state and sector committees and each school was required to form its own DSP committee of teachers and parents. In reality there were multiple DSP programmes which were initially held together by a national publishing and professional development programme.

The DSP was intended to operate as a kind of Trojan horse which leveraged wider change on the back of its relatively small investment. Inevitably, in policy committees at every level sets of competing agendas came into play, for example: productive school-family connections versus parenting programmes; whether the professionalisation of teaching included teacher unions or not; and the deconstruction of the ‘competitive academic curriculum’ (Connell, Ashenden, Kessler & Dowsett 1982) versus making working-class children more successful within given structures.

Despite these tensions, for the very first time schools in the DSP had access to discretionary funding and space to determine their own priorities. But this autonomy was not given; it had to be earned through writing submissions. The submission-based nature of the DSP, while always a source of angst and accusations of grantsmanship, ensured that the state or sector exercised some framing of the directions of the programme and also promoted strong ownership at school level and encouraged innovative and creative thinking. While the DSP rhetorically homogenised schools through its appellation of disadvantage and its vexed narratives about poverty and education, at the same time it also allowed vernacular interpretations and local agency. This structure/culture spawned a rich array of reforms (Connell, White & Johnston 1991).

### *Growing up*

The DSP provided much wanted and needed additional funding to the schools serving Australia’s poorest communities – but not at enormous levels. It did not

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Some adjustment was made for schools with significant numbers of Aboriginal and Torres Strait islander and ‘non English speaking background’ children.

keep pace with rising costs. The arbitrary cut-off points for funding meant that neighbouring schools with only marginal differences in populations were differently funded, some 'in' and some 'out' of the DSP.

The development of 'identity'-based politics in the 70s and 80s brought gender, Aboriginality, ethnicity, physical and intellectual ability and language heritage to the foreground. These concerns were manifest not only in the DSP but also produced a host of Commonwealth 'Special Purpose' programmes which were to be coordinated at state and national level, but integrated at the local level. However, communication and organisational difficulties between the various Commonwealth initiatives within the state systems led to accusations of schools 'double-dipping' (getting money from the DSP and also from Aboriginal education, for example): this led to the first proposals for more mainstream approaches to equity which combined the DSP with other programmes (e.g. Beasley 1988).

Nevertheless, the DSP survived a period of federal conservatism which replaced the freewheeling welfare-statism of the Whitlam Labor government with a more austere approach. Schools and states continued to develop new approaches: to school-community relations; to managing schools more democratically; to helping teachers become practitioner researchers; to make students agents of school and community change; and to develop new approaches to curriculum, pedagogy and assessment (Connell *et al.* 1991).

### *Running out of steam*

The abolition of the Schools Commission in the late 80s by the next federal Labor government marked the end of any efforts to coordinate nationally the policy intentions of the DSP, although the less powerful Schools Council did continue to produce some materials documenting the learnings of the programme (McRae 1990). Without new macro-theoretical development, the emphasis of the national DSP administration turned to measurement of its effects. Policy discourse shifted to that of efficiency, effectiveness *and* social justice. Outcomes were to be emphasised, not inputs or process.

Continued threats of Commonwealth funding cutbacks accompanied the development of national projects to develop indicators of success (Ashenden 1987; MCEETYA 1994). States grew variously committed to idea of devolution and local accountability, and schools moved to more coordinated forms of development planning and local management. The DSP and DSP schools often led the way, allowing schools to move away from specific submissions towards the presentation of whole-school change plans (see Rivzi 1995 for debates about democratic participation versus management). The Commonwealth then moved to put all of its equity funding into one income line for the states and sectors (Schools Council 1992), leaving them not only to decide how much should go on gender, and how much on poverty, but also the basis on which funding should be determined.

In the final years of the DSP there was considerable discussion about its 'failure' to make a difference: this relied on narrow definitions of outcomes. As human capital theory inexorably became the major policy rationale for schooling there were

ongoing reviews of the mechanisms used for targeting funds (e.g. Quin, Ashenden & Milligan 1994). While questions of poverty and social justice remained on the federal policy agenda, they were increasingly tied to an economic imperative, technologies of New Public Management and neoliberal ideas about the virtues of a competition state (Lingard & Porter 1996; Reid 1998).

In 1996 a national conservative government, committed to reform via industrial deregulation, privatisation and harsher regimes of corporatism and audit, was elected. The Howard government abolished the DSP. In its place was a small set of programmes about citizenship, the education of boys, leadership, mental health and, because it could not be constitutionally avoided, indigenous education. The Commonwealth Literacy Programme was the apparent replacement for the DSP and continued providing some funds, but at a much lower level, to the same set of targeted schools.

I now move on to consider the strengths of the DSP.

### THE DSP AS A MODEL OF CHANGE

There was something of a DSP culture. Connell (1993: 67) suggests that teachers in DSP schools tended to be younger and better qualified than those in non-DSP schools, although their social and economic origins and union membership were the same as teachers in non-DSP schools. Teachers in non-DSP schools placed 'greater stress on academic goals and formal curriculum sources such as text books, while teachers in DSP schools placed more emphasis on negotiation'. Teachers, and indeed parents, who had relatively long service in DSP schools, did build up a core of 'specialist labour'; they had 'accumulated practical knowledge about what does and does not work in disadvantaged schools' (Connell 1993: 68). This expertise was concentrated on: (1) worrying away at the mandated curriculum to make it more 'relevant and meaningful' (terms which were ubiquitous in DSP schools) by bringing the interests, needs, languages and knowledges of children and their families to the centre of classroom work, and (2) changing the school environment, processes and culture to make them more open.

The DSP was remarkable for the quality of the professional education and debate that it promoted. The early years of the programme saw a number of national and state conferences featuring key international figures such as Paulo Freire. Publications about the relationship between class and education were produced and debated. Local researchers developed their own theorisations and approaches to understanding and tackling the tangle of schooling and class (e.g. Connell 1993; Connell *et al.*, 1982; Connell, Johnston & White 1990; Connell, White & Johnston 1990; Kemmis, Cole & Suggett 1983) and these were widely known and taken up within schools and school systems.

Action research became a hallmark of the DSP. Long before international leadership and management scholars began to talk about teacher leadership, leadership density and distributed leadership, DSP schools routinely released individual and teams of teachers to conduct school-based research on aspects of their practice and students' experiences. These practitioner research projects were often

conducted with the support of a university partner, and reported to wider school-based groups, community bodies and other schools so that the findings/learnings could become more widely spread.

Literacy programmes were always a feature of the DSP because the capacity to read and write in formal English was understood to be a major educational sifting/filtering mechanism. Those children who could not master the kinds of reading and writing — and to a much lesser extent speaking — privileged in schooling were destined for less education and potentially narrower life opportunities.

But looseness of local interpretation also produced some problems. Research conducted in the late 1990s (Thomson 1999, 2002) suggests not all funds were expended wisely.

I was in the DSP schools when we bought the sewing machines and that sort of stuff, and then the cliques of parents moved into the school and we couldn't work out how to kick them out... because they took over and no-one else got a look in (T 13)

DSP flexibility allowed, in some schools, a culture of liberal welfarism which actually did children no favours.

I think we did some good things for parents... I worry that we shortchanged the kids... if they didn't come we'd say "Oh that's OK dear, we understand what it's like at home". If they didn't do their homework, we'd say, "Oh yes, well, we know what home's like". (T2)

The DSP also encouraged missionary zeal and an unsustainable expenditure of time and energy.

I used to scrimp and save on everything, get second-hand stuff... We used to deliver phone books and the staff would be working on weekends doing it, and after we'd get about \$4000. And after we'd been doing it for about five years I decided we'd just stop doing it. It's not worth it (T2)

But the DSP did also force a level of democracy into a system which had previously been highly autocratic and centralised.

Ironically the submission-based system had some good parts to it. People actually had to sit down and discuss and they had to negotiate with parents to put in a submission, because it had to be supported by parents (T13)

This kind of participation did inform other government initiatives – for example, the Participation and Equity Programme in the late 1980s (see Thomson & Turner 1989 for a practitioner interpretation) which focused on increasing school retention in secondary schools. It also paved the way for groups such as Aboriginal and Torres Strait Islander communities to form their own consultative organisations and processes.

#### STRENGTHS OF THE DSP: A BOTTOM-UP VIEW

The DSP provided more than money and participative mechanisms. Teachers could see clearly in hindsight what had been lost when the Howard government disbanded it in 1996. Despite some continuity of funding for literacy, school administrators in

former DSP schools expressed regret, sadness and concern at its passing noting its three main strengths. These are outlined below.

*A sense of moral purpose and connection with wider social issues*

DSP schools were charged with a particular social mission. They had legitimate ways to explain the connections between social context and school success and they were able to be, see themselves and represent themselves to others, as having a mandate to shift what was tangibly inequitable. They were responsible for giving all students ‘a fair go’ and for making headway against a long history of taken-for-granted elite schooling.

The replacement of the DSP with a literacy programme took away that sense of purpose.

The government now wants *not* to acknowledge that there are real disadvantaged groups and pockets in the community. They’d like us to think that all the problem is, is literacy and we’ll just top them up with literacy and it’ll all go away... I don’t believe you achieve social and political change and empowerment by making kids better spellers. (T15)

*Strong systemic support for school knowledge production*

The DSP created networks of schools and provided expert assistance in the form of advisory teachers who regularly visited ‘their’ schools, carried information about what was happening throughout the state and the country, and put schools with similar interests in touch with one another.

... You knew everybody in the DSP schools. There would be research. You’d have a section of the Department that gave you some acknowledgement and recognition, and a lot happened. So while you were working in a hard school, you felt supported. (T2a)

The abolition of the DSP removed a source of stories about reform in practice. Teachers and principals valued highly the circulation of detailed narratives from schools dealing with the same kinds of problems that they also faced daily.

In the early days of the DSP there were connections between neighbouring schools and parents... I think the research about what are effective programmes is what I’m missing.... You don’t hear a lot about the programmes, about what people are *actually* doing, of the *details*... It’s all just about identifying and collecting data. (T13)

*Robust forms of parent involvement and school-based decision-making*

The DSP fostered high levels of participation in action and decision-making. Submissions or school development plans that could not demonstrate widespread involvement received short shrift. While a few school principals saw this as a troublesome imposition, many believed passionately in the importance of working with, not against, the local community.



I'm here because I believe in social and political change and empowerment.... I'm here for the community and for the students. It's about community development and community change. (T15)

This 'DSP position' is in stark contrast to contemporary policies which see parents as consumers and governors rather than as citizens capable of active participation in everyday school life (Crozier 2000; Vincent 2000). Long after the programme had finished, many principals still used DSP modes of speaking and working (see McInerney 2005; Smyth, Hattam & Lawson 1998).

However, many of the barriers to change which dogged DSP schools were not of their making. They were exacerbated in the successive policy period.

### POVERTY POLICY IN NEW TIMES

The replacement for the DSP was the Commonwealth Literacy Programme. Whereas the DSP set a broad framework which could be read and re-read at state and school level, the new national and state policy regimes positioned schools not as producers of knowledge but as implementers of reforms designed elsewhere.

#### *The Commonwealth Literacy Programme*

Schools were expected to meet more defined goals and have an unremitting focus on within-class literacy learning, with apparent improvements measured by means of nationally moderated state-wide tests (Comber 1997; Luke & Elkins 1998). Far from having a moral purpose and social mandate, disadvantaged schools were abruptly shifted to the status of a systemic 'problem'.

Well they seem to be ... saying "Yes there are all these difficulties out there that you talk about, but when we compare you with like schools, you're not performing as well" ... all that understanding I thought used to be there is gone away. Because the implication is not "Gee, you're working so hard to get better", but "Perhaps we'd better come in and have a look" (T16)

The new construction of 'disadvantaged schools below par' had a demonstrable and sometimes debilitating impact on staff and their teaching practices. In some instances it legitimated a local return to deficit discourses and remedial and more punitive approaches.

The change in the DSP to focus on literacy... in a sense there's a message in that. It says we think the problems are actually about kids who can't do things. (T16)

Former DSP school principals felt acutely that they were unfairly depicted by conservative policy rhetoric as well-intentioned but unprofessional educators who believed that good intentions were enough. Their past activities were characterised as empty-headed and ineffective and they, and their practices, in need of dramatic reform.

We act like we've *never* had any data – *now* we're collecting data about who's succeeding and who's not. We had some terrific data about kids' learning ... (in) the DSP. (T2)

And many felt that their capacity to make a positive difference was seriously hampered and their real needs unrecognised.

You have to justify that you need a breakfast programme to start with before you can do anything else ...there's no way parents and kids can get to decide what you do with your literacy money. (T7)

If the DSP was, at its best, as these principals suggest, a supportive, better theorised and more democratic programme than what followed, then it is important to see why it failed to produce major changes in students' learning.

### STRUCTURAL CONSTRAINTS

The capacity of DSP schools to make substantial gains in students' learning and well-being was hampered by structural factors, some of which were a direct result of education policy, while others fell into other areas of public policy. Some, of course, such as the production of unemployment through company closures, were more difficult for governments to tackle. Here I focus on education and public policy, drawing on my own research and experience (e.g. Thomson 1990, 1997, 2001, 2002).

*Disadvantaged schools were required to do more than their more affluent counterparts*

DSP secondary schools had to offer a broader range of curriculum options. They not only had a great many more small classes in university oriented disciplines but also greater numbers of students requiring access to hands-on activities in industrial-level facilities using expensive consumables and equipment.

Both primary and secondary DSP schools had to offer extensive language and learning support to the large numbers of immigrant and transient children who settled in low-income areas. This was on top of assisting those who struggled with the mandatory routines and practices of school and who were increasingly not eligible for special education support. Helping students to reach the required standards also meant teaching differently: teachers could not simply approach lessons with the same methods that allowed middle-class students to be successful. They had to learn about their students' specific backgrounds and consolidate new approaches to designated learning outcomes. This required collaborative learning which meant additional time and support. Government funding, even where targeted to disadvantaged schools, fell short of what was actually required to meet the needs of all students.

*Disadvantaged schools had fewer funds to call on than schools in more comfortable localities*

Parents in DSP schools were unable to offer additional financial support to supplement government funding – and this 'voluntary' contribution came to be increasingly important during the lifetime of the DSP and beyond.

The most obvious ... poverty comes through at the beginning of the year with school fees and how that might or might not be paid and the number of people who engage in time payments and the number of people who in fact don't pay... when kids can't complement the initial stationery issues... it's the uniform business, it's about the kids not having access to as many resources in their homes, the technology is an obvious one – we have 8 laptops that kids can borrow in a school of 850... (T6)

DSP school fundraising inevitably produced minimal returns and schools in de-industrialising regions could not rely on donations from sponsors, a growing feature of Australian state school systems to this day.

*Disadvantaged schools had more difficulties in attracting and retaining staff than the majority of schools*

Disadvantaged schools faced a continual churn of new staff, often unwilling recruits to settings for which they had little inclination or empathy.

In 1996 we had 65 per cent staff turnover, half of whom were contract with increasing enrolments and limited facilities. So we've done a hell of a lot of work with staffing and personnel and we've actually managed to keep our staff turnover rate in 97-98 down to 9 per cent... and that has made an enormous difference for the community and the kids (T13)

Staff, including school management teams, in disadvantaged schools were always younger and more inexperienced (thus also cheaper for the state system) than their more affluent counterparts. Ironically, despite their apparent unattractiveness to many teachers, and the continued proportion of staff on short-term contracts, disadvantaged schools also acted as training agents for the wider system.

We have lots of people who come to us and say 'I didn't apply to be here so...'... you work on a yearly cycle and continue to develop that morale and continually show them that you're a good school and you work to enable that to happen and *some* of them in a term say, 'Yeah, it's a great place to work'. (T11b)

The DSP commitment to innovation, to reflective teaching, to action research, and to distributing leadership, meant that DSP schools produced significant numbers of teachers who were seen to be of benefit to the wider system. There was thus always an outflow of staff to other schools and regional and central offices. This continued to reduce vital capacity in DSP schools, while adding to their instability; their training function was never adequately recompensed by the state.

*Disadvantaged schools dealt with more problems than other schools*

The communities that DSP schools served had greater levels of stress, hardship and ill health than communities in middle-class locations. Staff needed a wide range of skills, and schools benefited from the appointment of staff with diverse professional backgrounds, including those with health, welfare and youth work qualifications.

The increasing residential segregation of Australian cities also played out in individual disadvantaged schools as adjustments that more well-off schools would not dream of.

A lot of kids and parents don't venture very far. I mean there's no transport at home, most don't have a car and the bus route has been cut right back. It's a bit of a ghetto, not a safe place... the people who live here don't go out after six o'clock... we have to have school council meetings right after school at three o'clock. (T23)

Family and community pressures produced increased demands on welfare, pastoral and discipline systems. These demands took vital time away from reform.

At the moment for example, at the camp last week we had to suspend about 8 kids, it was one of those ugly 'boys bullying' numbers, and since then, for myself and the counsellor, following that through has just been about 60 per cent of our time, doing all the parent talk – where is it all up to, who have we seen, how to do we get the message across, what do we do with this child – in a normal time, it's probably about 40 per cent of our time... (T15)

Making connections with parents who themselves were not successful in their schooling and who often had problems well beyond that of their children's schooling, required dedicated staffing and additional time.

#### *Disadvantaged schools could not always find adequate support*

From the mid-1980s onwards, the public services that supported poor communities faced an ongoing series of cutbacks and re-organisations. This not only undermined their capacity to offer stable and sustainable support to DSP schools but also created situations where disadvantaged schools became de facto welfare agencies, adding even further to the calls on their expertise and time. Government social policy spectacularly failed to come to grips with these issues.

#### *Market-based policies created more problems*

Policies of devolution and school-based staff selection introduced in the late 1980s and early 1990s exacerbated the problem of getting and retaining enough of 'the right staff with the right stuff'. Expanding choice of school also added to the woes of many DSP schools. A few entrepreneurial disadvantaged schools did succeed in stabilising their staffing and 'creaming off' students from other schools: this competitive approach disturbed the relatively collaborative networks that had been established via the DSP. It also provided ready-made exemplars of 'star' schools which could be used to demonstrate that stellar improvement against the odds was possible.

When the Commonwealth Literacy Programme replaced the DSP, these structural constraints became ever more potent in framing and limiting what it was that the former DSP schools could do.

## REFORMING SCHOOLS

In concluding this chapter, I suggest that there are some important lessons to be learnt from the DSP. In addition to the examples given earlier in the chapter about the influence of the DSP, I here highlight what might arguably be the two most enduring and important.

*Teachers can make schools change*

According to Connell (1993), the DSP was school-focused, teacher-centred and anti-bureaucratic. It gave prominence to the agency of school staff and discursively positioned them as ‘solution’ makers, not as ‘problems’.

All of the change literatures (e.g. Hargreaves 1994; Schlecty 1997; Woods, Jeffrey, Troman & Boyle 1997) highlight the importance of local teacher agency. Bascia and Hargreaves (2000) suggest that failing reform efforts — and most reforms do fail (Sarason 1990) — do not recognise what it is that teachers actually do, what they must do to change, and the complexities of reform. Arguably, the DSP positioned teachers as intellectuals engaged in a socio-political project. It did not see them as technicians or as mere implementers of policies. It provided time, access to ideas and leadership (see also Adelman, Walking Eagle & Hargreaves 1997; Davies 1996) and eschewed the creation of discourses of fear and guilt (Ball 1993; Stoll & Myers 1998). While it may have ignored the emotional labour involved in change (Hargreaves 1998), it did position teachers as principal agents in redressing histories of educational inequity.

The DSP promoted a kind of inside-out hybridising model (Cochran-Smith & Lytle 1993; Goodlad 1994) based in teacher action research and local school-based innovation. Teachers were encouraged to consider how problems within their school could be solved and to bring these into conversation with curriculum, identity politics, pedagogy, assessment and social justice. Staffs were assisted to take an historical and sociological perspective that was broader than their classrooms and school. They were provided with just enough time and money to support inquiries about which they were expected to report to their school and to others. There was a strong sense of a collective effort built into what might otherwise have been isolated, individual projects.

Given the current widespread distrust of teachers that now exists in the UK and the USA, the experience from the long-lived DSP stands as counter evidence and as testament to those who argue that teachers *are* able to make a difference (e.g. Barth 1990; Darling-Hammond 1994; Sachs 2003, 1993).

*Where it worked well, the DSP pointed to the possibilities for a national change network*

The DSP managed to effect change *within* targeted schools, going from one small discrete programme with marginal funds to whole school change (without funds disappearing into locally managed budgets). This shift was not matched by

wholesale scaling up from a relatively small number of DSP schools to entire systems.

Connell argues that decentralisation was the programme's greatest strength and also its greatest weakness.

A great deal of scope is provided for local initiative, and when things go well this produces imaginative work carefully tailored to local needs. But the small scale of a special-purpose program limits the impact of such work, and decentralisation also means a lack of coordinated work on what are, after all, large-scale social and educational problems. (Connell 1993: 108).

In some states the DSP never moved beyond a decentralised set of 'lighthouse schools'. As Fink (2000) argues, such starring schools face an 'ironic change dynamic' (Fink 200: 48) in which either the sustainability of innovation is sacrificed as key leaders move out to carry the reforms to other parts of the system, or reform across the system is prevented by maintaining the presence of creative leaders within the single school. One answer to this conundrum is to find ways in which leading schools can work with others without decimating their own capacities. This might be a network.

Networks have been a part of the educational reform process in many countries. They are characterised by a loose organisational structure which allows collaboration across sites. They can be broad or narrow in focus, big or small and permeable or closed. In some states, particularly Victoria and South Australia and in some regions of New South Wales, the DSP *did* become a network. It shared information. There were regular face-to-face meetings across disadvantaged schools and regular exchange of detailed information about what was happening across a number of sites. But the DSP was not just face to face with controlling hubs with spokes of communication that extended out to the rest of the network: it consisted of 'multiple nodes of interconnected influence that follow less predictable and geometrically precise patterns' (Hargreaves & Fink 2006: 179).

The network relied on:

- a strong national philosophy, common language and narrative to 'glue' local initiatives together. An elaborated moral and intellectual purpose is a hallmark of other long-lasting networks, too – see for example the Coalition of Essential Schools (Sizer 1985, 1992, 1996; Wasley 1994) and the National Writing Project (Gray 2000; Lieberman & Wood 2002);
- external national and state support staff — sometimes called 'change agents' (Rust & Freidus 2001) or 'design teams' (Datnow, Hubbard & Mehan 2002) — who not only carried stories and experiences around the programme and put people in touch with each other, but also organised networking events; and
- an integrated practice-theory partnership between schools, and between universities and schools, which produced critical debate, a continued means of re-focusing, and ensured some cohesion and collective knowledge accumulation.

However networks and teachers need particular kinds of support, and one further learning must be taken from the DSP.

## POLICY TO ADDRESS MAJOR STRUCTURAL BARRIERS

There is a range of issues that prevented the majority of DSP schools from doing as well as they might. These must be the focus of any future policy agenda that aims to produce social justice in education. I list here the ones that are most critical:

*Staffing policies must support disadvantaged schools to attract and retain well-qualified staff.*

In the first instance this means more nuanced teacher education and induction programmes which assist beginning teachers to understand the specific intellectual, emotional and physical demands of the work of changing educational outcomes. In the second instance it means making the staffing of the so-called 'hard-to-staff' disadvantaged schools the first priority of 'human resources' policy, rather than waiting for an illusory 'level playing field' to produce a set of unfilled vacancies that can be mopped up with reluctant recruits. Thirdly, it means providing the kinds of additional staffing to disadvantaged schools that will help them to cater for the calls up on them – counsellors, health and youth workers, community development workers. It also means the development of specific incentives which will retain the most experienced teachers and leaders in schools, rather than have them plucked out for systemic duties or poached by aggressive competitor schools.

*Funding policies must cover what is needed.*

Governments cannot simply, as is generally the case, provide additional funding for equity programmes and make only marginal adjustments to core funding. A realistic costing of what it takes to make a difference to the schooling of all children and young people is required. This also entails an examination of the total resources available to schools – their capacity to raise funds, the reserves of cash on which they can draw, additional expenses that they incur by virtue of the age and location of their plant and the overall cost of their staffing complement.

*Market-based policies must be wound back*

Policies which promote individual choice, a lone school ethos, and a vicious competition between private and public school systems, must be moderated in favour of a notion of collectives of schools which serve specific regions and neighbourhoods. Predatory schools should be penalised, not praised for their extra-ordinary results accrued from selecting only the most academically competent students. However such a shift will only make a difference if it is combined with strategies to intervene in the increased polarisation of cities and rural communities.

*Curriculum, assessment and pedagogy must be back on the agenda*

Reforms will only work if teachers and academics work together to: deconstruct the binary of hands-on and bookish approaches to learning; redress the continued lack of attention to family and neighbourhood literacies and funds of knowledge; and undo the practices of setting and subject choice which underpin the competitive academic curriculum. Such instructional renewal must build slowly on the aggregated knowledge of schools and may require waivers from existing regimes of testing and examination. Professional development for teachers which is rewarding and rewarded is a necessary accompaniment: this should include learning about change itself, as well as support for processes of documentation which enhance self-evaluation and the dissemination of materials and narratives to others.

## CONCLUSIONS

There is currently no equivalent to the DSP in Australia, no idealistic policy promise to tackle poverty and/in schooling. Evidence that this is needed can be readily seen in the persistent nexus between social class and educational outcomes (Teese 2000; Teese & Polesel 2003). But no-one has as yet re-thought a national approach to changing schools that serves neighbourhoods and communities made poor.

I have highlighted in this chapter some of the things that might be carried forward from the DSP: the role of ideas as a central resource for change; the importance of networks and of partnerships with universities and other schools; the significance of teachers as researchers and leaders; and the critical role of policy as an enabling frame. I have also suggested in this chapter that the long duration of the DSP and the move of DSP staff away from schools and in some cases into influential positions in other schools and within the system more generally, allowed the diffusion of DSP ideas and practices across some of the school systems in Australia. It was therefore a model of change which had influence beyond the immediate group of targeted schools. I have detailed key structural barriers which must be tackled if equity reform programmes are to have real purchase. Attention to structural constraints was not a feature of the DSP and this omission was certainly heavily implicated in the production of its only partial successes.

Above all, the DSP demonstrates that tackling an unjust education system is a slow and somewhat tenuous affair. Over a little more than two decades Australian schooling changed for the better, as the overall mass level of education was substantially raised. There was no dramatic shift in the proportions of young people from working-class backgrounds getting into higher education: educational destinies and opportunities continued to be meted out in much the same way as they always had, albeit to a markedly better-schooled populace than in the previous two decades.

Much was learnt through the DSP by individual teachers and by schools. It is school systems and policy makers that have to date failed to capitalise on those learnings. The lessons are available, if those in power have the will to attend to them.



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## Policy, Practice and Effects

*Geert Driessen and Hetty Dekkers*

## INTRODUCTION

When it comes to tackling educational disadvantage, multiple policy phases with their own emphases can be distinguished in the Netherlands (Meijnen, 2003). These developments do not stand alone and have been strongly influenced by social, economic, demographic, cultural and political developments both nationally and internationally. The changing political colour of the government in the Netherlands has also guided the formulation of policy and the transformation of policy into educational practice (Karsten & Meijnen, 2005).

In the 1960s, attention was primarily paid to the unfavourable position of *working-class children* and thus to the relations between social milieu and educational opportunities. Under the influence of democratisation processes, a society with more egalitarian and meritocratic principles was being striven for. Positions in society should only be acquired on the basis of personal competence; socioeconomic background should play no role in this; and education was assigned a selection and allocation function in this connection.

Under the influence of the women's liberation movement in the 1970s, the lagging school careers of *girls* showed up on the political agenda. The unfavourable position of girls was apparent in their participation levels in secondary and higher education, the directions they chose for such education and their more limited access to the employment market as a result of such choices. While the educational delays of girls have been transformed into a lead on a number of fronts, the position of women in the employment market as a result of 'wrong' educational choices is still less favourable than the position of men.

Starting in the 1980s, large numbers of *immigrant children* streamed into the Dutch educational system from former colonies, so-called guest workers and refugees or asylum seekers. It quickly became apparent that these children lagged greatly behind other children on a number of fronts. And although their position has improved somewhat over the past decades, immigrant pupils still show major delays when compared to white middle-class pupils.

Attention to the problems confronting working-class children has disappeared into the background as a result of the immense amount of attention being paid to the plight of minority children. However, the position of working-class children in the Netherlands is still very worrisome.

Via this brief introduction, the three different perspectives which are central to Dutch educational disadvantage policy have also been alluded to, namely, social milieu, gender and ethnicity. In the following, a more detailed historical overview of government policy with regard to these groups will be presented. The effects of this policy will also be considered. And thereafter, an up-to-date overview of the educational positions of the relevant groups of pupils will be provided. A number of conclusions will then be drawn. In the present overviews, the focus is on social milieu and ethnicity as the gender perspective is considered elsewhere in this volume. It should be noted that the distinction between social milieu and ethnicity is rather analytic as the two are strongly intertwined (Driessen, 1993). The primary education of 4 to 12 year-old children and to a lesser extent the secondary education of 12 to 18 year-olds will be of concern as these age groups have been the principal targets of policy aimed at the elimination of educational inequality. Finally, for an overview of the Dutch educational system, the reader is referred to NMECS (2004).

## GOVERNMENT POLICY WITH REGARD TO EDUCATIONAL DISADVANTAGES

### *Compensation and Activation Programmes*

The initial starting point for government policy to alleviate striking educational disadvantages was the development and evaluation of a number of compensation and activation programmes. Inspired by examples from the USA, programmes were conducted in the 1960s and 1970s in a few big cities with Dutch working-class children as their target. The objective was to improve the educational opportunities of working-class children via specific programmes, teacher training, expanded parental involvement and stronger relations between neighbourhood and school. The family activation programmes addressed, for example, aspects of child rearing and problem behaviour within the family. The educational stimulation programmes were aimed at the cognitive and social-emotional development of the children as well as school achievement within the domains of language/reading and counting/mathematics (Slavenburg, 1986).

### *Educational Stimulation Policy*

Despite disappointing results, these initially local initiatives were adopted on a more widespread scale in 1974 in the form of the national Educational Stimulation Policy (*Onderwijsstimuleringsbeleid*). In this way, a start was made on the centralisation of policy intended to alleviate the disadvantages of working-class children by providing schools with additional resources. Cooperative relations between schools were established, as were educational guidance services and other public welfare institutions (e.g., libraries, child care services). The evaluation of the policy considered only the manner of implementation and not the actual effects of the policy. The results moreover were difficult to demonstrate as only those schools

using the resources were examined and a control group was thus lacking. The evaluation concluded that the instruction was of a fairly traditional nature with an increased emphasis on social-emotional objectives and lowered aspirations for language and mathematics achievement. Parental participation was given little priority, nor was cooperation with welfare services (Mulder, 1996).

### *Cultural Minority Policy*

In the 1980s, the number of immigrant children entering the Dutch educational system gathered momentum, particularly in the large cities. This involved immigrants from former Dutch colonies (e.g., Surinam, Dutch Antilles) and guest workers from Mediterranean countries (e.g., Spain, Italy, Turkey, Morocco). The first category of immigrants was somewhat familiar with the Dutch language and culture. A significant portion of the second category of immigrants had little or no education, was illiterate and did not speak the Dutch language. A third, very heterogeneous, category of immigrants consisted of asylum seekers and refugees from Eastern Europe, Africa and the Middle East. It quickly became clear that many of these immigrant children were experiencing major problems in Dutch education, and the government therefore made additional resources available to schools within the framework of the Cultural Minority Policy (*Culturele Minderhedenbeleid*). The allocation of these additional resources depended, among other things, on just how long the children in question had been in the Netherlands.

The policy was characterised by a two-track strategy. Some of the immigrants were expected to return to their country of origin while others were expected to stay, which meant that the government had to strive for remigration and integration at the same time. Different tools were put to work within the education sector to achieve these objectives. One important initiative was so-called Mother Tongue Instruction (*Onderwijs in Eigen Taal en Cultuur*), which was a form of bilingual education. The pupils were taught in Turkish or Arabic, for example (Driessen, 2005) but also taught Dutch as a Second Language (*Nederlands als Tweede Taal*) in order to make it possible for the children to at least be addressed in Dutch. Another policy initiative was Intercultural Education (*Intercultureel Onderwijs*), which was intended to teach both minority and non-minority children to handle the similarities and differences associated with ethnic and cultural background.

### *Educational Priority Policy*

In the years that followed, there was a growing conviction that the problems which the immigrant children were experiencing in education were the same as those being experienced by Dutch working-class children. The relevant policies, however, were fragmented, incoherent and formulated largely on an ad hoc basis. In order to maintain existing measures, establish some continuity of policy and simplify the relevant regulations, the Educational Stimulation and Cultural Minority Policies were integrated in 1985 into the Educational Priority Policy (*Onderwijsvoorrangsbeleid*). The aim of this policy was to reduce those educational

disadvantages arising from economic, social and cultural factors. And in order to do this, an 'educational areas' component and a 'staffing' component were distinguished with the following characteristics (Driessen & Dekkers, 1997).

Within the educational areas component, primary and secondary schools and such welfare institutions as libraries and day-care centres were to work together at the local and regional levels to alleviate disadvantages. The 'areas' were Educational Priority Areas or those areas where an accumulation of disadvantageous factors can be seen to produce a high rate of educational deprivation. Among the activities were: preschool activities with parents and their children; reading promotion projects in collaboration with libraries; homework projects; and registration and guidance projects for truant pupils and early school leavers.

As part of the staffing component, primary schools were given additional teachers depending on the socioeconomic and ethnic composition of the school population. Various categories of disadvantaged children were distinguished and assigned a weighting factor for the allocation of the resources. Roughly speaking, ethnic minority children counted as 1.90; Dutch working-class children counted as 1.25; and non-disadvantaged children counted as 1.00. More concretely, this meant that a school with predominantly ethnic minority pupils had almost twice as many teachers as a school with predominantly non-disadvantaged children. Given the variation in the weights for the different groups and the uneven distribution of the groups across cities and rural areas, the staffing component of the Educational Priority Policy in essence boiled down to an ethnic minority policy. The schools were free to determine the use of the allocated resources. The funds could be used to improve the contact between teachers and parents, for extra instruction in the child's first language, for extra lessons in Dutch as a Second Language or for remedial teaching. However, most of the schools applied the resources to form smaller classes and thereby enable more individualised attention from teachers.

While no such schemes as the one for primary education existed for secondary education, minority children in secondary school might be temporarily allocated resources within the framework of programmes aimed at the facilitation of their entry into the Dutch education system. And among the resources were Dutch as a Second Language classes and so-called International Transition Classes, which were special classes to prepare recently immigrated children for participation in regular Dutch education.

### *Municipal Educational Disadvantages Policy*

At the beginning of the 1990s, concern about the educational problems of Dutch working-class children disappeared even further into the background. All attention was now paid to the educational plight of minority children in the Netherlands. It was clear that the current policies regarding minorities and education were not producing the desired effects. While some progression could be observed in the educational position of ethnic minority children, their performance nevertheless lagged far behind that of native Dutch children. Marked differences between the various minority groups were also apparent, with the position of Turkish and

Moroccan children constituting a major cause for concern. The so-called Matthew effect was repeatedly confirmed; that is, the differences which exist between minority children and native Dutch children at the start of primary education were only found to increase throughout the school careers of the children (Mulder, 1996).

To combat the observed educational disadvantages, a new arrangement was introduced to establish a more stringent planning of activities and thereby allow schools to concentrate on their core activities. With the aid of the National Policy Framework (*Landelijk Beleidskader*), the general Educational Priority Policy objectives were crystallised into more specific goals. The most important goal for the period 1993-1997 was to improve the language and mathematics achievement levels of the children from the various target groups. Other goals were to improve initial integration into school, reduce absenteeism and prevent unqualified school leaving. In addition, there was a new call for attention to the preschool period.

From an administrative and organisational point of view, the idea was that the central government would no longer carry responsibility for the details of how to tackle the educational disadvantages and that the local authorities or, in this case, the municipalities would do this. The school was also assumed to be better equipped to fulfil its primary task when closer links to the broader societal context were established. And at a local level, there would be more possibilities for education to be given a place in an integrated policy. The keywords underlying the new approach were: decentralisation, deregulation and increased autonomy. Such an approach was not, incidentally, adopted within only the educational sector but in other sectors as well. The national government provided only the policy framework, with responsibility for the further planning, implementation and evaluation of the policy lying with the local municipalities. An integrated, efficient and effective approach was assumed to be possible only at a local level, which meant that municipalities and schools were given more autonomy with respect to the spending of resources and the content-related design of policy. In 1998, the Educational Priority Policy was replaced by the Municipal Educational Disadvantages Policy (*Gemeentelijk Onderwijsachterstandenbeleid*). Financial resources were distributed to municipalities in one lump sum. The municipalities had to use them in accordance with a local plan formulated for this purpose. And the local plan had to elaborate upon the objectives formulated within the National Policy Framework and indicate just how the schools were going to deploy the resources being allocated to them by the municipality.

For the period 1998-2002, a new National Policy Framework was formulated. The framework incorporated many of the same objectives as the previous framework which included special attention to the preschool and early school periods, Dutch language mastery, referral to special education as needed, reduction of school dropout and equality of participation in education. The registration and monitoring of locally initiated developments was also now introduced as an objective.



### *Educational Opportunity Policy*

In 2000, a critical evaluation of the educational disadvantages policy followed to date appeared (Tweede Kamer, 2000). There was concern about the effectiveness of the policy and the position of those schools with numerous pupils from disadvantaged groups. In response to this evaluation, a new trajectory was introduced as part of the Municipal Educational Disadvantaged Policy and referred to as the Educational Opportunity Policy (Onderwijskansenbeleid). The focus was on a select group of disadvantaged schools, and the policy was introduced in a stepwise manner: first, the large cities; then the medium-sized cities, and then the remaining small communities and rural regions, with a total of some 400 schools involved in the trajectory. A central element in the new policy was customisation. The Municipal Educational Disadvantaged Policy was aimed primarily at projects initiated by the community with very few connections to the core activities of the schools themselves. In contrast, the Educational Opportunity Policy required the school to first present a problem analysis based on the specific situation of the school and the particular needs of the pupils and parents. Given this information, the school then determined which sustainable changes were desired. And the adoption of an integrated approach also constitutes a critical element in doing this (Ledoux *et al.*, 2005). This change forms a first step towards even further decentralisation of policy and responsibilities concerning educational disadvantages.

For the period 2002-2006, the National Policy Framework was further refined and sharpened. An attempt was made to establish quantifiable objectives for the areas of preschool and early education, school career support, dropout prevention, Dutch language mastery and the adoption of Educational Opportunity Policy.

### *Recent Developments*

In 2004, a policy note entitled 'Education, integration and citizenship' (*Onderwijs, integratie en burgerschap*) (MOCW, 2004) appeared and the Dutch government subsequently raised a number of issues on these topics for discussion. It was announced that the roles of the schools, communities and national government in the elimination of educational disadvantage were going to be revised. In fact, the trend towards decentralisation was continued, with increased autonomy accompanying this. Responsibility for the elimination of disadvantage in primary and secondary education was placed mainly with the schools (i.e., school administrations), without interference by the municipality. The municipality nevertheless continued to play an important role in the provision of preschool and early education. And the staffing component was revised. Up until this point, primary schools were allocated extra teachers on the basis of the background characteristics of the pupils (e.g., education, profession, and ethnicity of the parents). In the future and in keeping with the most recent policy, the allocation of extra resources on the basis of ethnicity will disappear and the education criterion will be maintained. A budget shift is thus going to occur namely from schools with numerous disadvantaged minority pupils to schools with numerous non-minority disadvantaged pupils. In this way, a shift

will also occur from the cities to rural areas. Transition classes are again being introduced to facilitate the entry of pupils with an inadequate mastery of Dutch into the educational system. The policy for the allocation of extra resources for secondary schools with numerous minority pupils is also going to be adapted in such a way that resources will go to those pupils with the greatest actual delays. All of this is assumed to boil down to the concentration of resources in those schools where the problems tend to accumulate the most, which is in the big cities. Attention was also paid in the aforementioned policy note to integration, segregation and citizenship. The negative effects of so-called black schools (i.e., schools with a high concentration of minority pupils) from both cognitive and societal perspectives (cf. Driessen, 2002) and the problems of Islamic schools (Merry & Driessen, 2005) are mentioned in particular. And it is further indicated that greater attention should be paid to the establishment of citizenship and social cohesion in the future.

## THE EFFECTIVENESS OF THE POLICY

### *Introduction*

In the preceding section of this chapter, the effects of some of the specific policies were considered in passing. In this section, more detailed attention will be devoted to the effectiveness of the policies. In 2000, the General Dutch Audit Office was requested by parliament to assess the results of policy aimed at the reduction of educational disadvantage (Tweede Kamer, 2000). With an expenditure of more than half a billion euros annually, the conclusions were negative. According to the Audit Office, the available information provides little insight into the implementation and actual use of the policy. In the years that educational disadvantaged policy was followed in whatever form, no lasting results have been achieved. Educational disadvantages have not declined noticeably. This may be due in part to the fact that the objectives of the policy have only rarely been operationalised into measurable terms, which makes it difficult to determine if the objectives have been reached or not. Furthermore, the connections between the educational disadvantage policy and other policies (e.g., special education, reduction of class sizes, restructuring of secondary education) are not at all clear. As a result, observed effects cannot be attributed unambiguously to specific policy operations. The reaction of the Dutch Minister of Education to these conclusions was to observe that a complex social problem is involved and that the results of the policy are difficult to examine in isolation, and that without the policies, disparities in educational outcomes might have been greater still.

It is striking that very little research has been conducted whatsoever on policy effectiveness.<sup>95</sup> Most of the relevant research has involved monitoring only, which

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95 For the sake of clarity, a 'policy effect' is any consequence of a policy; 'policy effectiveness' is the extent to which the policy has contributed to the achievement of a particular objective (Mulder, 1996).

means that only a description of the achievements of the groups targeted by the policy and *any* developments in these is provided. No relationship with the policy itself can be drawn, however. In the following, we will therefore attempt to determine the effectiveness of the educational disadvantaged policy (or parts thereof). In other words, we will consider whether the policy has contributed to the achievement of the objectives which it set. This will be done first with regard to the policy in general and then with regard to a few concrete components of the policy.

### *Educational Priority Policy*

In order to evaluate the Educational Priority Policy (EPP), a number of large-scale cohort studies have been undertaken in both primary and secondary schools with related research projects and in-depth studies to supplement them. The cohort studies were initiated in 1988/89 for grades 4, 6 and 8. Some 700 schools (or almost 10 per cent of the total number of Dutch primary schools) and 35,000 children took part in each round. One year later, 5000 of the children were followed into secondary school. In 1989/90, another large-scale cohort study was initiated. Almost 400 schools (or more than 20 per cent of the Dutch secondary schools) and 20,000 first-year students took part in the study. For the primary school studies, the performance of the children was examined in relation to: (a) the disadvantaged category they belonged to and (b) the level of additional resources the school received. Three categories of resources were distinguished: area schools, staff establishment schools and non-EPP schools. In this way, an attempt was made to determine and monitor the effects of the actual policy pursued. Given that no additional resources are allocated for secondary education, the cohorts with only a very few exceptions started in secondary education serve a different purpose.

The results of all these studies have been described in a series of reports and the summative policy evaluation into the effects of the EPP in primary education for the period 1988-1992 by Mulder (1996). The findings can be summarised as follows. Cross-sectional and longitudinal data show the poor language and mathematics performance of Dutch working-class and ethnic minority children did not improve, in general, with the performance of Turkish and Moroccan children being particularly poor. The performance of the Dutch working-class and minority children lagged even further behind the performance of the non-disadvantaged children. The working-class and minority children were more likely to repeat a year than the non-disadvantaged children and were also more often referred for special education. Nevertheless, the performance of the children in schools located in Educational Priority Areas generally improved more than the performance of children in schools that were only awarded EPP staff establishment resources or no additional resources whatsoever. The minority children within the area schools caught up with their peers although the changes were only minor and Mulder (1996) does not attribute them to the EPP but simply to the fact that the minority children had been in the Netherlands for a longer period of time. For each level of secondary school and every secondary education cohort year, in contrast, the minority students performed more poorly than the Dutch students. Minority students were also more

likely to shift to a lower level of education, repeat a year or leave school without a qualification. And the highest percentage of dropouts was found for the Moroccan students (cf. Dekkers & Driessen, 1997).

### *Mother Tongue Instruction*

Under the EPP, all children of guest workers were entitled to receive Mother Tongue Instruction (MTI) for a maximum of 2.5 hours a week during school hours and 2.5 hours after school (or a total of 5 hours). The children were taught in the official (i.e., standard) language of their or their parents' native country. In 1995, 67,000 children were enrolled for MTI. Of these, 61,000 were of a Turkish or Moroccan origin, and this constituted 73 per cent of the total number of Turkish and Moroccan children in primary education.

MTI has been the topic of fierce controversy ever since its inception, predominantly due to the objectives formulated for it. Prior to 1991, MTI involved both a linguistic component and a cultural component. After this date, the cultural component was dropped. Initially during the first half of the 1970s the official objective of MTI was based on the assumption of temporariness and it was intended to help migrant children *reintegrate* back into their native countries upon their return there. Around 1980, the Dutch government abandoned the assumption of temporariness, and the objective of reintegration, and acknowledged the permanent presence of such migrants in the Netherlands. MTI then had the following three functions: to help develop a positive self-concept, diminish the gap between school and home environment, and to contribute to intercultural education. In other words, MTI was now aimed at *acculturation* into Dutch society and the more general educational policy objectives for minorities. MTI was increasingly viewed as a means to improve the educational success of migrant children and, in 1986, this view was reinforced: MTI was more or less assumed to be a part of the EPP which came into effect that year. The assumption that mastery of the mother tongue can facilitate Dutch language learning gained considerable ground in the ensuing years. In 1991, the Dutch government officially stated that the main purpose of MTI was to facilitate Dutch language learning and the mastery of other school subjects. Over and above this, MTI was also intended to provide access to the children's home culture (i.e., cultural heritage) and thereby develop their self-confidence. The ministry distinguished two types of MTI. In the lower grades, MTI is intended to support immigrant children's learning of the Dutch language. In the upper grades, MTI has an autonomous function as a form of cultural education. After the terrorist attacks of 9/11, the political climate in the Netherlands changed dramatically. Calls for *assimilation* as opposed to the maintenance of minority languages and cultures have become influential and include the abolition of MTI as of 2004. And according to the Ministry of Education, evaluations of MTI show no clear effects and priority should therefore be given to the learning of Dutch.

Despite the fact that MTI has been provided for some 30 years now, only a very few evaluation studies are available. There is a fair amount of discussion of the adequacy of the research methodologies applied and, in this respect, the situation in

the Netherlands does not differ greatly from that in other countries. It is possible to distinguish two strands in the evaluation of MTI: (a) evaluation of the effects of MTI on the command of the mother tongue and knowledge of the native culture; (b) evaluation of the effects of MTI on Dutch language proficiency and other aspects of the regular school curriculum. The effects of MTI participation are not at all clear in terms of either mother tongue performance or regular education performance. For many children, the level of proficiency in the mother tongue as a result of MTI has not been found to be very high although the general level of oral and written Turkish mastery is reasonably good. Moroccan children's command of Moroccan Arabic (i.e., the informal oral language) as a result of MTI has been found to be limited and their command of standard Arabic (i.e., the formal written language) has been found to be virtually nonexistent. Longitudinal evaluations further show the level of mother tongue proficiency deteriorates over time (Driessen, 2005).

### *Intercultural Education*

Within the Dutch context, the term Intercultural Education (ICE) has been used by the government since the beginning of the 1980s. ICE is an umbrella term and exactly what it stands for is not particularly clear although it appears to be more or less the equivalent of what is referred to as 'multicultural education' in the UK and USA. According to the Dutch government, ICE is an important tool for acculturation or the two-way multi-faceted process of students getting to know each other, being open to each other's cultures or elements of such and accepting and appreciating each other. The underlying assumption is that children today grow up in a multicultural society and that this should also receive expression in appropriate school subjects.

For a short time, the importance of the development of a positive self-image was also emphasised but this objective was later transferred to MTI and ICE was instead expected to combat and prevent stigmatisation, stereotyping, discrimination and racism based on ethnic or cultural differences. Over the years, the knowledge aspect of ICE has received increased emphasis. This involves students not only acquiring knowledge of each other's backgrounds, circumstances and cultures but also gaining insight into the manner in which values, norms, customs and circumstances influence the behaviour of people. Such affective and socio-psychological objectives as respect, acceptance and self-image have been incorporated into the relevant policy along with a number of cognitive goals. And ICE is also considered useful to combat the structural inequality fuelled by ethnic prejudice and discrimination.

To implement ICE, the government used the following resources and instruments: public information, guidelines and brochures, subsidies for educational resource development, in-service teacher training courses and compulsory multicultural studies during teacher training. Some schools were selected to trial aspects of the program and serve as pilot schools.

The number of evaluative studies for ICE is even more limited than for MTI. In fact, only a small number of studies have been carried out on the design of ICE and virtually no research has been done on the effects of ICE for the children

themselves. As early as 1985, Fase and van den Berg (1985) observed that, although the Ministry of Education reported being satisfied with ICE policy, there was actually very little reason to feel this way. Their research showed ICE to be given low priority in schools. Furthermore, there was just as much prejudice and discriminatory behaviour in those schools which reported working with ICE as in schools which reported not working with ICE. On the basis of a new study a few years later, Fase *et al.* (1990) added that the results with regard to the project policy were also not very encouraging. Not only operational objectives and concrete suggestions for everyday practice were lacking but also quality requirements. It was further noted that the changes in the very general objectives which had occurred over time had virtually not affected the implementation of the policy. The results of empirical studies of primary and secondary education showed only a very limited amount of attention to be paid to ICE: only 10 per cent of the schools reported putting ICE into practice; 30-40 per cent had plans to do so or were preparing to do so; and 50-60 per cent reported doing nothing in relation to ICE. This conclusion was very surprising in view of the fact that ICE had been a compulsory component of primary education for a number of years already. Within the schools, there was a widespread lack of clarity and major differences of opinion with respect to the value and exact nature of ICE. The attitudes and efforts of a small group of teachers appeared to be decisive and, when ICE efforts actually got off the ground, this was primarily in schools involving considerable numbers of immigrant children. According to van der Werf (1995) school policies may include an intercultural element, but this is rarely translated into specific projects or teaching materials. In actual classroom practice, ICE usually takes the form of briefly discussing certain cultural customs and otherwise not departing from the standard curriculum.

#### *Pre-school and Early School Education*

One of the findings revealed by research on the educational position of disadvantaged groups of pupils is that disadvantaged pupils and particularly ethnic minority pupils often already lag considerably behind their peers when they start primary school and simply do not catch up over the years. For this reason, the focus of attempts to combat educational disadvantage is increasingly being placed upon the initial years of school and the pre-school period. The underlying assumption is that many of the factors which prepare children from middle and upper socioeconomic backgrounds for school are missing in the family situations of ethnic minority and, for that matter, working-class children. Of particular importance are those aspects of a child's upbringing that harmonise with formal instruction in school. All kinds of home- and centre-based intervention programmes have thus emerged at both the national and local levels for children between the ages of 0 and 7 years. The emphasis is on the linguistic and cognitive development of the children, and this may or may not be combined with the provision of educational support for the parents. The programmes are often based on compensatory programmes and strategies such as the Head Start or Follow Through programmes in the USA. And recently, there have been major initiatives in the areas of preschool and early

education. For example, while only 25 per cent of disadvantaged children participated in an intervention program in 2003, the goal is for 50 per cent to do so in 2006. The emphasis is on participation in a centre-based programme with two programmes considered particularly effective up until now, the Pyramid (*Piramide*) and Kaleidoscope (*Kaleidoscoop*) programmes.

Considerable controversy surrounds the various programmes and, from a methodological perspective, questions are being raised about just how much particular effects can be attributed to particular interventions or programmes. The main conclusion up until now has been that any effects are very limited and usually fade with time. However, there are some signs that the situation is changing and that some positive enduring effects may occur. While only a very few studies have been conducted in the Netherlands and they mostly involve internal evaluations concerning programme implementation, those studies that have assessed outcomes have found they are largely in keeping with the results for other countries.

A few studies of *day-care attendance* have shown a positive influence on the cognitive and social development of children although the quality of the day-care being provided appears to play a critical role. Other studies have revealed a negative influence, with one possible cause lying in the discrepancy between the degree of attention and stimulation received at home versus that received at the day-care centre.

Very little research has been conducted on the effects of *preschool attendance* in the Netherlands but, from the little that is known, the quality of the care in terms of the programme and the staff appears to determine the children's developmental progress.

Various studies have been conducted on the effects of specific programmes within the Netherlands. The studies are usually small-scale and employ an experimental or sometimes longitudinal design to compare a group of children who participated in a programme with a control group of children who did not. The results of a series of parent-child programmes have proved disappointing. Kohnstamm (1997) found no effects for one of the Step-up programmes (*Opstapje*) when evaluated using a battery of language and math tests. Similarly, Klerx and van Vught (1997) could not find any differences related to participation in two Step-up programmes (*Opstapje* and *Opstap*). Evaluation of the Revised Step-up programme (*Opstap Opnieuw*) (van Tuijl, 2002) showed some very limited effects which appeared to differ depending on the domain being tested and the language group. In a recent large-scale national study, Driessen (2004) examined the effects of day-care, preschool and various home- and centre-based stimulation programmes in combination and separately and both cross-sectionally and longitudinally but found no effects whatsoever. In other research, Tesser and Iedema (2001) conclude that parent-child programmes have primarily positive effects for the participating parents and not for the cognitive development of the children involved. Evaluations of the integrated Pyramid and Kaleidoscope programmes reveal a few positive effects with respect to the cognitive and language development of the children involved but, once again, the effects clearly fade and also differ per domain and per programme (Veen, Roeleveld & Leseman, 2000). Very few significant results have been

detected for social-emotional development but, in connection with this, one should keep in mind that positive effects may depend on a particular set of conditions including the duration and intensity of the care, the efforts of the caregivers and the continuity of the service or programme with the children's later care and education.

### THE EDUCATIONAL POSITION OF WORKING-CLASS AND IMMIGRANT CHILDREN

In the previous sections, the results for a few specific components of Dutch educational disadvantage policy were considered. It can generally be asserted that it is virtually impossible to demonstrate that any observed results are actually a consequence of the policies being pursued. In the following, we will present a compact overview of the educational position of the most important target groups for the policy, namely the immigrant and working-class children.

Since 1994/95, the bi-annual Primary Education (*PRIMA*) cohort study has been conducted among 4- to 12-year-old school children in the Netherlands (Driessen, van Langen & Vierke, 2004). Language, reading and mathematics tests among others are administered to pupils in grade 2, 4, 6 and 8. During the final year of primary school (i.e., grade 8), the schools also recommend the type of secondary education most suited for the children. For purposes of the *PRIMA* study, the social-ethnic backgrounds of the pupils are also considered (i.e., a combination of parental level of education and the ethnic origins of the parents). Blok (2004) has summarised the achievement of different groups of children on the basis of the nationally representative data for the school year 2002/3. Three disadvantaged groups were distinguished, namely Turkish and Moroccan children with low-educated parents (i.e., maximum of a vocational education), other immigrant children with low-educated parents and non-immigrant children with low-educated parents. The achievement of these children who constitute the target of the educational disadvantaged policy was then compared to the achievement of those children with higher-educated parents (i.e., more than a vocational education). The so-called effect sizes were then calculated, which reflect the standardised difference between two groups. As a rule, a difference between 0.20 and 0.50 is interpreted as 'small', a difference between 0.50 and 0.80 as 'moderate' and a difference greater than 0.80 as 'large'. The relevant figures are presented in Table 11.1.

As the figures in the table make clear, large differences exist between the three disadvantaged groups of children and the reference group (i.e., children with higher-educated parents). Non-immigrant children with low-educated parents score considerably poorer; the other immigrant children with low-educated parents score even poorer; and the Turkish/Moroccan children with low-educated parents score the poorest. The delays are about the same across the different grades. These findings correspond to the findings of Driessen (1996) who showed Turkish and Moroccan children to have a language delay of almost two years with respect to the children of higher-educated parents at the start of primary school and the delays do not decline in the higher grades of primary school. For mathematics, a lag of about a half a school year was generally found to be the case (Gijsberts, 2003).



Table 11.1: Effect sizes for language, reading and mathematics achievement according to social-ethnic background of pupils (reference category: children with higher-educated parents)

Domain	Grade	Social-ethnic background		
		Low-educated Turkish/Moroccan	Low-educated other immigrant	Low-educated non-immigrant
<i>Language</i>	2	-1.06	-0.92	-0.41
	4	-1.24	-0.84	-0.33
	6	-1.05	-0.78	-0.48
	8	-1.10	-0.70	-0.47
<i>Reading</i>	6	-1.05	-0.73	-0.61
	8	-0.92	-0.63	-0.60
<i>Mathematics</i>	2	-0.72	-0.62	-0.40
	4	-0.82	-0.75	-0.37
	6	-0.82	-0.62	-0.49
	8	-0.76	-0.59	-0.55

Note: Data come from Blok (2004)

Information on just how many pupils have experienced delays in the form of mostly being held back a year is also available. In the highest grade of primary school (i.e., grade 8), these children are thus older than the children who have not been held back. The relevant percentages for the school year 2003/4 are presented in Table 11.2.

Table 11.2: Percentage of pupils experiencing delays in primary school according to social-ethnic background

Social-ethnic background		
<i>Low-educated immigrant</i>	<i>Low-educated non-immigrant</i>	<i>Other</i>
33%	24%	15%

Note: Data come from Mares (2004)

The percentages show one-third of immigrant children with low-educated parents have experienced actual delays. For children with higher-educated parents, this was 15 per cent or less than half of the percentage for immigrant children with low-educated parents.

In Table 11.3, an overview of the information on the secondary education recommendations provided by the schools during the last year of primary school is presented. More specifically, the percentage of the pupils receiving a recommendation to prepare for a professional education or higher is presented.

Table 11.3: Percentage of pupils with a recommendation to prepare for a professional education or higher according to social-ethnic background

Social-ethnic background			
<i>Low-educated Turkish/Moroccan</i>	<i>Low-educated other immigrant</i>	<i>Low-educated non-immigrant</i>	<i>Higher Educated</i>
17%	23%	20%	48%

Note: Data come from Blok (2004)

The percentages in Table 11.3 show that the three disadvantaged groups of children receive relatively fewer recommendations for a higher level of secondary education than children with higher-educated parents. Once again, the particularly disadvantageous position of the Turkish and Moroccan pupils stands out.

In order to obtain an impression of the level of secondary education pursued by the different ethnic groups, the percentages of the pupils successfully completing the final examinations for the different levels of secondary education in 2003/4 are presented per group in Table 11.4.

Table 11.4: Percentage of pupils completing different levels of secondary education according to ethnic background

Level of secondary education	Ethnic background		
	<i>Non-western minority</i>	<i>Western minority</i>	<i>Non- minority</i>
<i>Basic or advanced vocational</i>	47%	27%	30%
<i>Theoretical vocational or mixed</i>	27%	26%	28%
<i>Preparatory professional</i>	16%	25%	24%
<i>Pre-university</i>	10%	22%	18%

Note: Data come from Mares (2004)

The percentages in Table 11.4 show that three-quarters of non-western minority pupils complete the lowest level of secondary education. For the non-minority pupils, this is nearly 60 per cent. With regard to the highest level of secondary education, only 10 per cent of non-western minority pupils successfully completed the final examinations while almost 20 per cent of the non-minority pupils did. When interpreting this data, it should be kept in mind that the non-western minority pupils are overrepresented among the group of pupils who drop out of school and do not take any final examinations (cf. Dekkers & Driessen, 1997).

## CONCLUSIONS

For more than 35 years now, the Netherlands has implemented policies to alleviate educational inequalities stemming from the social milieu and/or ethnicity of pupils. There has been an evolution from local policy to central policy and back again to a decentralised level, momentarily even partly down to the level of the school. In content the initial focus on disadvantaged Dutch pupils has shifted to 'old' (immigrants) and 'new' (refugees, asylum-seekers) migrant groups. Despite an investment of billions of euros and the efforts of many individuals, the policies have produced disappointing results. The delays of the children with low-educated minority parents are still quite large while the delays of children with non-minority working-class parents are somewhat smaller but still substantial. And in this, the Dutch situation does not differ from that of other countries (Karsten & Felix, 2005).

In our opinion, the finding that educational disadvantage policies have had few or no effects can be attributed in part to the policies themselves, and in part to the ways in which they have been implemented. The policies do not have an adequate foundation, being insufficiently anchored in theory, or they are not explicit and so cannot be translated into operational and therefore measurable terms. Funding has often been as part of broader programmes, so the exact level of funding for the policies has remained unclear. Furthermore, the policies have often been subject to endless compromises of a political nature, and have become unfocused and diffuse (cf. Mulder, 1996). It is also possible that the failure to find significant effects stems from the way in which the evaluation research has been conducted. An experimental approach is usually not adopted, which makes it difficult to demonstrate clearly the existence of effects (Tesser, 2003; Raudenbush, 2005). It should also be borne in mind that the position of immigrant and working-class children might be worse still in the absence of the policies and funds discussed in this paper. The persistence of significantly poorer outcomes for these groups of children suggests that much remains to be done (cf. Tweede Kamer, 2000), a view fortunately shared by mainstream Dutch politics.

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## INTRODUCTION

Slogans calling for “une école juste” (fair schooling) are often as vague as they are effective in mobilising public opinion: though there is apparent agreement on the desirability of greater fairness in education, the matter of defining fair schooling parameters is extremely complex and riddled with ambiguity:

1. Is fair schooling purely meritocratic, involving perfect scholastic competition among unequal pupils?
2. Does it go further than this, compensating for social inequalities by providing more to those who have less, thereby breaking with strictly meritocratic equality?
3. Is it schooling that guarantees a minimum of knowledge and skills to pupils so that the inequalities it generates itself do not cause the situation of weak pupils to deteriorate even further? In this case, fairness implies offering guarantees of the utility of all types of study and training programs.
4. It may also be fair schooling is schooling in which curricular and performance hierarchies have relatively little effect once pupils are out of school; in fair schooling the first concern is to ensure that all are socially integrated and that pupil rankings do not affect the equal dignity of individuals.

It is tempting to affirm that fair schooling should encompass all these conceptions of fairness and others besides. But this is to assume that a unitary or all-embracing concept is possible, whereas each of these ideas of fairness immediately runs counter to the others, if not at the level of principle, at least in practice and in terms of education policy. A fair scholastic meritocracy does not ensure reduction of inequalities; a concern for pupils’ social integration may very well increase the likelihood of their following precisely the socio-occupational trajectories that have already been to a considerable degree determined by their social origin; policy emphasis on minimum common knowledge and skills could well limit the expression of individual talents; and schooling arrangements attentive to students’ individuality could well have deleterious effects on the transmission of shared culture, transmission which is a duty for all schools and which is in itself a form of fairness. Clearly there is no perfect solution; there are instead more or less satisfactory combinations of models and necessarily partial answers.

The combination of models that prevails and so defines what makes for fair schooling in a given country and at a precise period in time can be understood with

regard to the historical background of the country and the present characteristics of its educational system. In this paper, we will start from the French case, but we are convinced that the issues at stake have a broader relevance. Putting in perspective the French prevailing conceptions of justice and some research results concerning the actual functioning of the system, this text brings to light some of the limitations of the models commonly used to conceive of and reflect on fairness in education. It is informed by the conviction that sociologists' responsibility is not limited to injecting facts into the public debate, however reliable those facts may be, but also and just as imperatively involves reflecting on the models used to understand those facts, models which are necessarily political or moral in nature.

### EQUAL OPPORTUNITY AND MERIT

In modern democratic education, everything turns on equality and merit. Whereas in *Ancien Régime* societies, in general aristocratic ones, priority was given to birth, democratic societies have resolutely chosen merit as a fundamental principle of fairness and justice. In this understanding, France's educational system is supposed to be both central and fair because everyone can succeed in school in a way commensurate with his or her efforts and attributes. Actually, up until the 1960s, merit came into play in France only on the margins: thanks to the scholarship system, a number of hardworking and "gifted" working-class children were able to leave behind the primary school (in which most of them were tracked) and accede to secondary education<sup>96</sup>. A minority of them were able to obtain the *baccalauréat*. *Republican elitism* was thus founded on an incompletely effective principle of merit, and the *école républicaine* was criticised with the intention of extending and generalising merit principles so that all pupils might be given a chance in the same competitive system. This was the idea behind several reforms launched just after World War 2.

In the last fifty years, the meritocratic principle has gradually been extended. First came middle school for all; later, *lycée* admission was widened considerably, followed by higher secondary education<sup>97</sup>. In matters of merit, the system became fairer, in that it now allowed all pupils to enter the race in a unified, theoretically homogeneous system. Formally, theoretically, all pupils today may lay claim to a chance at excellence because in principle everyone whose scholastic record is good enough can enrol in the most prestigious study programs. In practice, this purely meritocratic conception of scholastic fairness is running up against major difficulties today. What are they?

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96 Till the beginning of the 60s, the French system was organised into two distinct tracks : five years of primary school (which could be followed by a vocational course) for the lower social background children, and secondary school (including a specific primary course), leading in seven years to the *baccalauréat*, this track being followed by the most privileged children.

97 To give only one example, the percentage of a generation reaching the level of the *baccalauréat* rose from about 5% in 1950 to 40% in 1986, and is about 67% today.

Fairness as indexed on merit is obviously affected by the set of inequalities that already characterise children when they begin schooling. A majority of sociology of education studies shows that opening up a space of objective scholastic competition does not efface those initial inequalities<sup>98</sup>; inequalities among pupils, first of all, to which must be added systematic inequalities between the sexes and among social groups. Privileged groups begin schooling with a decisive advantage which only increases in the course of education. The meritocratic school system has of course gradually raised the educational level of the population at large, but instead of disappearing, the gaps between groups have been displaced: we now find the same social inequalities upon entrance to *lycée*, i.e., the higher secondary school, as those operative forty years ago upon entrance to lower secondary school. And given the enlarged pool of competitors, competition for access to the most prestigious degree programs has increased.

To this observation on the inequitable nature of scholastic *destinies* should be added another on the inability of the school itself to construct a space of pure equal opportunity. The meritocratic model assumes that the schooling system organizes perfectly fair competition among competitors who have been put in a situation of equality. In fact, a broad segment of sociology of education research shows that the world in which the contest takes place is not a fair one. First, because schooling supply often has the effect of ratifying existing social inequalities among pupils: the requirement that children be sent to their neighbourhood school<sup>99</sup> confines the poorest to what may be called ghetto schools, where teachers are less experienced, educational teams much less stable, and where pupils make less scholastic progress. At the other extreme, special courses preparing for the prestigious *Grandes Ecoles* (elite schools) offer the best pupils – who are often the most socially privileged – an intensive education in small classes with motivated and experienced teachers.

Furthermore, daily school functioning itself produces inequalities. Because the school is a kind of factory for producing social judgements, everything from primary teachers' evaluations to decisions on tracking bear the mark of pupils' social origin, in addition to their scholastic merit (see Merle, 1998). These social inequalities, produced by the school itself, compound inequalities among families – in this case, inequalities related to unequal degrees of familiarity with the world of education, as Bourdieu and Passeron emphasised it in the seventies. All in all, the meritocratic model is far from being realised in terms of either quality of schooling supply or everyday school functioning: the fair competition it is supposed to implement is never perfectly fair. That must be stressed, because in France, the advocates of « *l'école républicaine* » were convinced that removing the barriers to access to education was enough to achieve a fair school, in which pupils succeed equally,

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98 For a synthetic presentation of scholastic inequalities, see Duru-Bellat 2002.

99 In France, there exists a system of zoning (the “*carte scolaire*”), and every pupil is supposed to attend the school of his or her zone, even if there also exists some possibility of derogation (about 10% of the pupils at the lower secondary level, as far as public schools are concerned, and about 20% for private ones).



whatever their social origin; however, as far as social inequalities are concerned, what is effectively offered to pupils is part of the problem.

How should merit be defined and how can it be grasped in practical terms? Even assuming we knew how to assess pupils' scholastic productions with perfect precision and objectivity, there would still be the question of what they reveal about the merit of each. Both the school and society at large use the term *merit* to designate a mixture of natural attributes – called in current “politically correct” understanding *talents*, or *abilities* – and personal effort, i.e., precisely what leads a pupil to be considered as deserving (*méritant*). But the proportions of these two components are far from clear. And while it may be assumed that effort is a matter of individual responsibility, this does not apply to abilities. The fact is that abilities are both unequal and strongly correlated with social origin. Since we know that human beings from the first hour of life develop in a social environment, it is hardly possible to disentangle biological heritage from family influence. What is rewarded as merit thus never refers to something the individual can be entirely responsible for. When we attempt in the name of fairness to align scholastic careers on merit as revealed through scholastic testing, we are both ratifying and granting legitimacy to inequalities whose social genesis we conceal.

If we assume that meritocratic equal opportunity is possible, this does not in any way reduce the cruelty of this particular fairness norm. Indeed, in the ideal of fair and formally pure competition, the *vanquished*, i.e., failing pupils (and every pupil may be considered as failing, relative to others) are perceived not as victims of social injustice but as responsible themselves for their failure, because the school is assumed to have given them every opportunity to succeed from the outset. The effect of this is that pupils tend to lose their self-esteem, and in reaction, may reject school, lose all motivation, and even become violent. They become in a way *excluded within the system*<sup>100</sup> and can no longer find consolation in invoking the social inequalities of which they may feel they are direct victims. In a system where pupils are constantly being compared to each other and ranked, performance inequality is hard to live with<sup>101</sup>. And in this respect, the French system appears as especially harsh, as some of the responses given by pupils in comparative studies such as PISA show.

From the teachers' perspective as well the meritocratic system is cruel because it turns school into the main agent of scholastic and social selection. Teachers are well aware of this. Their latent sense of guilt about it adds to the considerable teaching problems created by the meritocratic principle. One manifestation of this is the crisis that France's middle school system – the French college – is undergoing. First, in competition thus arranged, academic contents tend to become merely a means of selection – this is what teachers mean when they deplore the fact that pupils work only for the grade. Second, all competition, even competition that is fair in principle,

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100. Cf. Bourdieu and Champagne, 1993. On pupils' experience of inequality, see also Dubet, 2004.

101. In France, during middle school years, pupils' self-image and confidence in their ability to succeed decline sharply; (cf. Grisay 1997).

creates major inequalities among competitors, and these are a source of huge difficulties for teachers, who increasingly lament the heterogeneity of their pupils. Although the general scholastic level has improved radically, the *excellence* threshold is also rising and pupil ranking is as inexorable as ever.

Still, it is impossible to scrap the model of fairness based on merit, for fundamental reasons. In a democratic society, i.e. one that postulates that all individuals are in principle equal but in which real social positions are not equal, personal merit appears to be the only way to construct ‘fair inequalities’, legitimate ones, since the other variety, inequalities linked to birth, are clearly unfair. Likewise, in order for schooling to function, people need to believe that the school’s verdicts apply to individual merit only, specifically, efforts made by individuals – though neither pupils nor teachers are entirely fooled.<sup>102</sup>

Though the only choice we have is to perfect the meritocratic model, that model has its limitations, and these are due to its very nature. Guaranteeing equal opportunity that itself works to provide access to unequal social positions ineluctably creates inequalities, as does the principle of indexing career inequalities on inequalities of individual merit. Equal opportunity in this case produces more vanquished than victors, and then leaves them to believe they themselves are responsible for their plight: they failed to seize the opportunity offered to them. To amend the model, therefore, we must turn to other fairness or justice principles.

#### DISTRIBUTIVE JUSTICE

The meritocratic ideal consists in equalising conditions of education and selection. Is this idea “fair” enough when individuals and social groups are not equal in the eyes of the system? Even if the school were capable of treating pupils as perfectly equal, identical treatment toward unequal pupils could only confirm or ratify their inequalities. Regardless of whether the origin of inequality between pupils is biological or social (involving in the latter case parents’ child-raising practices and their ability to guide children through school), clearly both types are unfair. This means that “indifference to differences” (as Bourdieu and Passeron said) is at fault. To attain greater fairness, the school must take real inequalities into account and work to compensate for all that is not a matter of individual responsibility: only in this way can *true* merit come to be assessed. This is the positive discrimination argument.

It would seem crucial first of all to do everything possible to make up for the manifest disparities among pupils at the outset of schooling. Analyses of schooling careers show that the effects of social inequalities on scholastic performance begin accumulating as early as nursery and primary school and are compounded and intensified throughout the schooling process. There is a certain amount of leeway, however: every year, the teachers that individual pupils come into contact with have a strong impact on their progress, often stronger than that of their social origin as

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102. On this belief, which is essential if the notions of effort and work are to have the absolute power they do in France, see Dubet 2002.

such. Moreover, the most effective teachers generally are also the ones most likely to reduce the gap between the strongest and weakest pupils. Consequently, reducing inequalities requires more effective teaching, especially toward the weakest pupils.

Alongside policies aimed at positive redistribution, it is advisable to counter the phenomena of reverse redistribution operating within the educational system. In France, the study programs reserved for the strongest pupils are also usually the most costly: a student in a prep course for entrance into the *Grandes Ecoles* costs twice as much as a student in an ordinary first-degree university program. Students in the most expensive educational programs tend to be from the most privileged families (in prep courses, one out of two students is a manager's child, against one out of three in other higher education structures). This obviously raises the issue of fairness: is it fair that students in the programs that offer the greatest personal benefits due to the value placed on their degrees pay none of the costs of that education, when they are likely to belong to the most privileged social categories? Is it fair that this cost be assumed by everyone else, including those who are not guaranteed a minimum qualification by the school? Here as in many cases, fairness consists in moving beyond pure equality.

These ideas, which have become familiar in France only since the eighties, run up against three limitations. The first is that positive discrimination arrangements have had only limited effect and have not proved capable of substantially transforming the system that produces scholastic inequality. Numerous evaluations show that their impact is often moderate and sometimes counter-productive; their bestowal can cause the recipients to be stigmatised. The second difficulty is that distributive justice always runs into strong resistance from those for whom the pure meritocratic model ensures effective reproduction of competitive advantages, as is shown by how hard it is to modify the *Grandes Ecoles* system. These actors are generally, and quite understandably, opposed to anything that might reduce their relative advantage. Well-informed parents are at great pains to reconstitute their children's advantage whenever a reform works to erode it. This was the case, for example, after the 1981 reform of the first year of *lycée*, which scrapped the former hierarchically organised set of study programs for an undifferentiated curriculum for all. Well-informed parents reacted by enrolling their children in Latin courses. For logistic reasons, Latin students were grouped together as a class for the other subjects, so this move had the effect of reconstituting an academic stream for middle-class students with its reassuring scholastic and social homogeneity. Another more recent example of the well-informed parents' strategies to preserve their advantage is their use of the individualised tutoring implemented in the first year of *lycée* for remedial purposes as additional aid for students trying to get into the prestigious math and science program. Lastly, a third limitation is that the social groups that are the most disadvantaged with regard to schooling, those who should *logically* be in favour of positive discrimination, are least likely to speak up for themselves readily or effectively. Given the inequalities among actors, it is extremely difficult for the school itself to reduce inequalities. However, these realities should not lead to categorical abandonment of positive discrimination redistribution policies.

To all these practical difficulties, hardly insignificant where large-scale schooling policies are involved must be added more fundamental difficulties at the level of principle. Are inequalities inevitable? Is it reasonable to hope they can be eliminated? If we assume that *natural* and social inequalities operative before schooling begins play a decisive role in scholastic careers while accepting that positive discrimination policies cannot substantially reduce them without calling into question the very principle of equal opportunity, then discrimination of this kind cannot be adopted as an overall formula for attaining fairness in schooling. To this scepticism about the possibilities of neutralising inequalities external to the school may be added the practical inability to distinguish clearly between scholastic inequalities that arise from *natural* and social inequalities on the one hand, and those that may be understood to arise directly from the individuals in question on the other. How are we to draw the line between unfair inequalities and *real* merit, the latter understood as an expression of individuals' freedom and fundamental equality? This problem gives more weight to the argument that positive discrimination ultimately runs counter to individual freedom and the equal treatment to which individuals are entitled. School busing in the United States soon became an impractical policy, just as the radical quota policies of communist country educational systems gradually gave way to less egalitarian meritocracies.<sup>103</sup> In both cases, the threat to individual freedom was too great: a version of justice that destroys freedom is extremely likely to stop looking just. Positive discrimination should therefore be conceived as a mode of adjustment at the margins of the equal opportunity principle. It ceases to be a fair policy precisely when it becomes too strong a threat to the *free competition* associated with equal opportunity, though in the best of circumstances, it works to combat the most flagrant injustices of that competition.

#### GUARANTEED MINIMUMS

If we resign ourselves to the fact that schooling itself necessarily creates inequalities, and that these inequalities cannot be of a perfectly fair variety because they are influenced by inequalities beyond the reach of schooling, we must then ask what the school owes to all pupils, and above all the weakest. Given that there can be no limiting of the benefits enjoyed by the strongest pupils; it then becomes central to guarantee a minimum of resources and protection to the weakest. This reasoning is familiar to us from wage and health policy, where a fair system is one that guarantees minimal thresholds beneath which individuals are prevented from falling (along the lines of the minimum wage and universal health insurance), guarantees aimed at limiting the effects of meritocratic systems whose mechanisms, as we have seen, often work to maintain and, in some cases, to accentuate inequalities. This conception of justice, Rawls' conception among others' leads to the understanding that schooling fairness cannot be measured in terms of pure

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103. Moreover, such quota policies created major inefficiencies in the school system, which led to moderating quotas in the former communist countries.

competition, but in the way it treats the weakest pupils. Here inequalities are acceptable, if not exactly fair, when schools improve the conditions that weak pupils are faced with, or at least do not make them worse.

In the area of education it is often hard to think in these terms, and the notion of a *cultural minimum wage* (that would be granted to every pupil like a minimum wage is granted to every worker) is often perceived in France as the Trojan horse that would bring with it a standard of mediocrity. But isn't it fundamentally unfair that as early as the first year of middle school, the performance scores of the weakest 10 per cent of pupils are three times lower than those of the strongest 10 per cent, condemning them to crippling difficulties in the continuation of their schooling? In this case, a fair schooling system – i.e., the least unfair – is not necessarily one that reduces inequalities between the strongest and the weakest but one that guarantees that the least advantaged pupils will acquire what are perceived as basic skills and knowledge.

This shift in approach is not without practical consequences and would require a profound reformation of current conceptions of scholastic competition. It is important first of all to define this new guarantee, and the real contents of a common school culture, a culture that all pupils would acquire by the end of compulsory schooling. In a way, the idea is to return to the sources of the *école républicaine*, which purported *merely* to educate children to be enlightened citizens rather than to attenuate social inequalities. The fact is that academic programs are not always conceived or designed this way. In meritocratic logic, whereby each person is allowed to attain the excellence he or she is theoretically entitled to, academic programs are defined in terms of that excellence; that is, with both eyes on the requirements of the next educational level. This is why weak pupils are likely to fall behind and drop out. And this kind of inequality seems normal: in France, an exercise that everyone can get right would be considered too easy.

This conception of fairness, where the priority is equality of results, or as Amartya Sen might say, “equality of basic capabilities” (Sen, 1992), implies changing viewpoints; this would be quite a dramatic change in France. However, attaining a threshold common to all requires accepting the principle of some degree of positive discrimination, which brings us back to the problem indicated above.

A minimum guarantee pertains to more than scholastic skills; it encompasses the problem of the social relevance of studies, the economic utility of educational programs. A mass schooling system aims to give all students a degree – degrees have become indispensable, especially in France, where diplomas are quite impossible to escape. One major cause of unfairness is that certain degrees are high-utility while others have no utility. Obviously all degrees cannot have the same utility, given that they provide access to unequal occupational positions. It is nonetheless appalling – and unacceptable – that some degrees are of virtually no use in the labour market<sup>104</sup>.

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104 The unemployment rates or the kind of job found after a tertiary degree are very unequal among the different tracks. For example, after 4 years in higher education, students from

The links between education (or training) and employment are of course extremely complex, and depend primarily on labour market conditions and demography. But though we cannot accuse the school of being at the origin of youth unemployment, it is to some degree responsible for the current situation. Educational qualifications in France have simultaneously increased in number and lost value<sup>105</sup>: the relative democratisation of access to certification has been counterbalanced by the general fall in value. A slight increase in scholastic equality has not led to a corresponding increase in social mobility. Numerous higher education or training programs, disconnected from the absorption capacity of the labour market, function exactly like snares. Students often choose them *negatively*, by default, and discover much later, to their great dismay, that they have been *swindled*.<sup>106</sup> This issue is not *politically correct* in France because of the general refusal to accept selection and the insistence on every individual's right to longer studies. But it leads one to question the current hypocrisy of criticising the *liberal* demand that education be adapted to market openings, and defending open access to mass education and free culture, while in the meantime making very sure to get one's children into the most selective, highest-utility educational programs. Though the relevance of applying the utility principle to study and training programs is in itself limited (if only because, as it turns out, we cannot reliably predict labour market trends), concern about the economic utility of degree programs partakes of an understanding of justice which, like that of minimum skills, invites us to judge a system's fairness by the way it treats the weakest.

It is by introducing the *principle of difference* – i.e., concern about what will become of the weakest pupils, whatever the reasons for their relative weakness – that we arrive at the fairness approach most capable of counterbalancing the *cruelty* of the meritocratic equal opportunity model. Concern about the minimums due to the weakest, while it may seem to reflect renunciation of the aim of fairly selecting the best, in fact allows us to redefine the aims of compulsory common schooling and break with a situation where all is determined by scholastic success, as this induces continuous selection through the failure of some.

Why should an argument that is so ordinary in the social world at large be so foreign to the school world, at least in France? It seems we are touching here on the most deeply anchored founding beliefs of the *école républicaine*, and the important place this schooling model is given in French society – not to mention the interests of the social categories that know best how to play the meritocratic game, given that education system professionals are also the wisest and best-informed users of the system.

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some literature tracks obtained mostly routine administrative work, while students from elite schools obtained mostly professional work.

105. Of the many publications on “devalued diplomas,” see Chauvel, 1998. For a broader analysis of this issue, see Duru-Bellat, 2006.

106. On the experience of higher education for young working-class baccalauréat holders, see Beaud, 2002.

## SOCIAL EFFECTS OF SCHOLASTIC INEQUALITIES

If we agree to give up the idea that it is possible to construct a type of schooling characterised by pure equality of opportunity, while understanding that this norm is fundamental in democratic societies, and even if the intention is to adjust this model through a dose of positive discrimination and to ensure that all pupils receive minimum benefits from schooling, it must be admitted that the school ineluctably produces inequalities that are not entirely fair and which in turn engender new social inequalities. We are used to reasoning about the scholastic effects of inequalities in place prior to schooling, but it is also important to look at inequalities located downstream of schooling; that is, the social effects of scholastic inequalities. In doing so we adopt a perspective that is hardly familiar to French sociologists of education, who tend spontaneously to think that social inequalities pervert equality of scholastic opportunity while scholastic inequalities, understood as more fair, are thought to have fewer negative effects on a society's overall level of justice.

One of the major problems with regard to justice is that of the relations among the various *spheres of justice* (Walzer, 1983). For Walzer, systems of inequality are produced in all areas of social activity: schooling produces its own inequalities, as do the economy, culture and politics. Inequalities in each of these areas can and must be combated, but new injustice arises when the inequalities produced by one sphere of justice give rise to inequalities in another. Unequal incomes thus bring about inequalities in the spheres of education, culture and health. In this perspective, a just system is one that ensures a degree of independence for the various spheres.

The fact is that the school sphere hardly functions autonomously. School-engendered inequalities have major effects on social inequalities: an educational degree may not be the sole determining factor for careers, but it is the one that most strongly determines integration and occupational development, especially in France, where credentialism is high. Is it fair that the best pupils benefit all their lives from extremely high incomes and levels of protection, protected by educational degrees that function like castes? How many individuals never manage, despite their skills, to gain any recognition in their occupations because of their scholastic record? In other words, is it fair that the educational degree should have such a strong, lasting hold in other spheres of activity, as if occupational skill were solely the result of education?

This question has iconoclastic force in France, where people readily assume that scholastic success is the sole legitimate means of acquiring social mobility and that strengthening the power of schooling therefore brings about a more just society. Once we accept the idea that educational degrees reflect much more than merit and skills and that scholastic inequalities are therefore not much fairer than the other varieties, then we have to ask whether it is not actually unfair to grant educational degrees so much importance. Wouldn't it be preferable to loosen the grip that educational degrees have on social status and careers? Here fair schooling would not claim to sort individuals definitively but instead allow those who failed or quit to try again. But how do we go about convincing the many who owe their position to their educational titles? It is hardly by chance that people with the lowest educational

level, who were quickly shunted aside in school, are the ones who, with the help of the labour unions, are nowadays in France fighting for “validation of acquired occupational experience” (i.e. having the possibility of obtaining a degree on the unique basis of their experience). This would of course break the school’s monopoly on certification.

Another reason to loosen the fit between education and socio-occupational prospects is that it turns the system into a self-perpetuating one: well-informed families bank on the two going together. If the assumption is that educational degrees strongly impact on children’s socio-occupational prospects, it is understandable that parents conceive of schooling instrumentally, as a function of social and occupational rather than specifically educational aims. But this also means the circle has been closed: in the competition for unequal and unequally desirable status levels, parents have unequal means at their disposal for reproducing advantages for their children.

The separate spheres of justice argument involves more than the school’s relation to its environment. It also applies to what goes on inside the school: unequal scholastic performances should not affect judgment of or behaviour toward individuals; a pupil should not be considered the sum of his or her performances.

In response to this imperative, teachers frequently propose a utopian vision: if schooling were fair, pupils could develop their individual talents and personal tastes independently of their scholastic performances. Fair schooling would respect each pupil as he or she is. However generous this vision may be, it leads us away from the notion of shared justice. In such schooling, educational and training programs would be calibrated in response to tastes that pupils manifest at any given point in time. Some have a taste for humanities, others for more concrete subjects. It doesn’t take a great sociologist to predict that pupils of the first sort belong to more highly educated families than pupils of the second. While it is possible in the abstract to decree the equal worthiness of all tastes and the multifariousness of *excellence* criteria, the fact stubbornly remains that courses of study are hierarchically ordered and lead to diverse, unequal types of occupational specialisation. It is the low status of manual jobs in France that explains why technological courses and the tastes associated with them are devalued.

Moreover, tastes are a matter of family socialisation. If the school followed them it would merely be ratifying the grip of such socialisation, whereas the vocation of fair schooling is to open pupils’ minds and perspectives and develop tastes and knowledge that are part of a culture perceived as universal and liberating. The question then becomes how best to weight the common core curriculum against electives that allow for expression of the diversity of personal tastes. A fair type of schooling is not one that refuses to recognise difference, and not all differences point to injustice. We need to recognise that the content of compulsory studies today is surely not equally stimulating and desirable to all young people<sup>107</sup>; it doesn’t have meaning or “make sense” for everyone, and consequently not everyone is going to benefit from it in their adult life. But if we go too far in adapting study content to the

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107 For a stimulating discussion on this issue, see Connell, 1994.



diversity of pupils' manifest talents and tastes, we lose the idea of shared education. Some degree of teacher adaptation to students is inevitable, but this constitutes a powerful vector for inequality: for instance, we know that teachers in schools with working-class populations demand less of pupils (van Zanten, 2001).

Even with an equal opportunity model counterweighted with a degree of positive discrimination and a set of minimum guarantees, the fact remains that all schooling necessarily creates failing students. A school system's fairness may be recognised in the fact that it treats the vanquished well, does not humiliate or harm them, preserves their dignity and the sense that they are equal to the others. Respect for the value of each pupil is thus preserved within what constitutes an autonomous sphere of justice.

This is hardly the case in a purely meritocratic education system where, on the one hand, competition is assumed fair and on the other, the *vanquished* are understood to be responsible for their plight – a description that applies well to French schooling today. Not only are weak pupils generally not treated as well as stronger ones, but they are *forced* to identify themselves with their scholastic failure, and they are tracked into the most devalued study programs (though such devaluing does not mean those programs are bad or useless – clearly vocational training is neither). Can a schooling system that practises *negative* student guidance, i.e., that advises pupils not in terms of their skills but their lack thereof in the only disciplines judged worthy or valuable, as the French one tends to be<sup>108</sup>, be considered fair? Clearly it is unjust for children from disadvantaged families to be virtually slated to move into the least skilled jobs – even if the school is not entirely responsible for this mechanism. And it is even more unjust that such reproduction of inequalities should go together with the stigmatisation and devaluing of individuals. This way of handling the *vanquished* of scholastic competition is both cruel and useless: it is painful to fail and be directed toward non-valued jobs; it is uselessly cruel to treat pupils with contempt the whole time they are on such a path.

Fair schooling would be more attentive to the dignity and self-esteem of pupils who don't succeed within it in the expected way. The vanquished will be better treated when we understand that the school should be committed to fully educating all pupils, regardless of their scholastic performance; when pupils are understood to be developing persons and not only participants in a contest. For this, schooling must be more than fair; it must endow itself with an ethic.

#### WHICH AGENDA FOR POLICY?

The methodical approach to the issues of equality and meritocracy proposed here lead us to suggest some changes that would be especially relevant in France, but arguably in many other countries to tackle the relative position of the weakest students and more broadly make for greater justice in school.

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108 Among others indicators, PISA data show that perceived teachers' support is especially weak among French pupils (compared to the OECD mean and countries such as Britain or Portugal).

First, focusing on teaching itself: reducing inequalities requires a deep concern – indeed, an obsession – with effective teaching. Acting on this concern clearly cannot be considered a shift in the direction of “classic liberalism”, as it is often denounced in France (leading to a great suspicion towards all form of external assessment); it is rather a fundamental obligation toward the weakest pupils, since they are more sensitive to the quality of the pedagogical environment. This requires the implementation of practical means that will enable teachers to educate and train pupils more effectively in the most unfavourable contexts, introducing compensation mechanisms centered on pupils and their work (optimising hours spent in school, tutoring). Distributive justice demands that, if we want everyone to know how to read, specific teaching arrangements must be set up in certain schools; in the same manner, if we want good students from disadvantaged suburbs to gain admission to the *Grandes Ecoles*, they need to be prepared specifically for this<sup>109</sup>. Equity and efficiency also require ensuring stability and quality of teaching staff, trying both to entice the most experienced teachers to work in the most difficult settings and also to shift from a teacher training centered on teacher subject knowledge (especially in France, where pedagogy is widely despised) to a more balanced one, giving more room to how to teach and to pupils’ social context and individual needs.

In the daily life of school, greater justice may be achieved through a more open way of operating in current evaluation or tracking decisions. For example, scholastic verdicts must be focused as fully as possible on manifest scholastic merit, so that they do not induce additional inequalities. If we think of meritocratic fairness as a kind of sporting contest, we must be sure that all contestants know the rules of the game and that the referees are impartial. This is not always the case in school.

One may also consider school programs themselves. Some European researchers (see Graaf *et al.*, 2000) suggest that social inequalities in attainment may be especially strong in countries where programs are loaded with “high brow” culture, compared with others where more room is given to the competencies required in daily life; there would be, in this respect, some opposition between the northern/southern countries in Europe. In any case, it is certain that more justice requires abolishing certain shared understandings between the school and particular social groups.

Another direction for greater justice is to strive to standardise school *living and working* conditions. This is a simple matter of justice – a supply of equal quality for all – and it is also the only way to extinguish, before they are acted upon, all the *good reasons* that well-informed parents have for fleeing certain schools, which thereby become *ghettoised*. This may require differential funding that actually reaches the students and meets their needs, and specific staffing policies aiming at lowering the rates of turnover in the poorest schools. This *anti-ghetto* policy may seem obvious, but in France it still runs counter to the obsession of equal treatment

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109 Some elite schools such as « Sciences Po. » are launching this kind of experiment, but such initiatives are often criticised by the students’ trade-unions themselves, in the name of equality. More generally, any positive discrimination arrangements focusing on groups are suspected to favour some minorities, so running counter the French “*unité républicaine*”.

of all schools, in spite of some changes since the 80s; moreover, it would reverse the present situation where, across the board, schools attended by privileged students are rather better funded and equipped than working class ones. However, to attain fairness in education, we must strive to preserve a unified system while taking care that schools remains as close to equal as possible.

The main objective of this unified system is to guarantee a minimum common knowledge and the real instrumental value of all educational degrees. Rather than being obsessed with excellence, academic programs for universal compulsory education must be defined in terms of a universal guarantee to meet basic educational needs, while the best pupils can of course go much further. There is no reason that the quality of some pupils' itineraries should undermine or disqualify the trajectories of others. This is especially relevant in France, where the selective perspective prevails, along with the dominance of general studies: the only means of acquiring higher status is to have more than others, to gain some distinctions (as Bourdieu would say), including distinctions which are purely academic and will prove worthless in the real world<sup>110</sup>. In contrast, some knowledge which would be useful for every pupil, such as some general technological courses, is in France delivered only to the weakest pupils, those tracked in the shortest vocational routes.

While rejecting any narrowly utilitarian approach, we may reasonably assume that what gives school diplomas their value is that they attest to acquisition of a certain number of skills that are useful in daily and occupational life and that determine the employment opportunities individuals may hope to access. It in no way deprives educational qualifications of their cultural dimension to think of them as a good endowed with a certain utility. This approach would require redefining core curriculum content<sup>111</sup> and looking closely at the social utility of academic and training programs available to pupils, including the weakest. It would require effectively re-valuing technical and vocational training and being more attentive to real pupil diversity, even though, as we saw, the school is not exactly autonomous in this matter. This would in any case represent a real revolution in student guidance mechanisms and in the culture of the teachers making the decisions.

We should also note that a schooling system that offers second chances – especially rare in France – would be less unfair because its own injustices would have fewer irreversible effects on individuals' prospects and futures.

Last, a fair school should affirm its educational role in the broadest sense of that term. A mass schooling system involving long-term courses of study for a large part of the young generations can no longer run on the fiction that instruction in academic subjects is in itself enough to properly educate pupils. This was only possible in a system reserved to some happy few, those Bourdieu and Passeron called *les héritiers*, subscribing from the beginning to the system's values. We must

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110 This process regularly gives rise to protest or even sometimes riots among French youngsters, involving both students belonging to university general tracks (as in spring 2006), and pupils having left school without any diploma (as in autumn 2005). In both cases, young people feel resentful towards school and very anxious concerning their future.

111 For an application of this perspective at the lower secondary school level (the French *collège*), see Dubet and Duru-Bellat, 2000.

therefore determine how to make the school a fully educational, cultural space, in a way that includes curriculum and instruction but also extends beyond this to include cultural and sports activities, the way school life is organised and attentiveness to pupils' lives outside the classroom. Just as the culture of the French system leads to devaluing technical and vocational training, so it seems characterised by a tendency to see these kinds of educational activities as unworthy, as amounting to nothing more than socio-cultural entertainment, matters best handled by outside specialists and unqualified young people hired by schools as non-teaching personnel.

This educational concern is especially important for the weakest pupils, the *vanquished* of the system. As noted previously, the French system, in which ranking and the obsession with excellence is everywhere, is especially harsh with them, and across the board, instead of really enjoying the fruits of a valuable education, they are at risk of being harmed by their experience of school. School should remain an educational space for every child, so that everyone may be socially integrated, have his or her dignity preserved and so develop that self-esteem which will be so important to get on in life. School should not only be fair, it should also bring some good to every pupil.

### CONCLUSIONS

Embedded in its socially inegalitarian environment, France's school system is a battleground for issues that go beyond it, and the combatants are unequal. This observation, as undeniable as it is discouraging, has led sociologists such as Jencks (1972) to conclude that greater egalitarianism in schooling depends more on reducing social inequalities than on educational reform. It is true that the few countries such as Sweden, where social inequalities in schooling have been considerably reduced in the last thirty years, are distinguished not by exceptional educational reforms but efforts to reduce economic inequalities among adults (Erikson and Jonsson, 1996). That leads us to stress the role of non-educational policies, i.e. programs for urban renewal and better housing, employment policies, health care and income support, and anti-discrimination measures. If pupils' families were less unequal, this would take some pressure off the school itself, enabling it to better focus upon cognitive and educational matters.

However relevant and helpful it is to relativise the role of schooling – we do not doubt this – the school *is* entirely responsible for the way it treats pupils who are not equal to each other, those it takes in as unequal and those it *creates* unequal by the way it functions. It is also true that however desirable a schooling system based on pure equality of opportunity might be, that system itself will necessarily create inequalities, and that the “fairer” those inequalities are perceived to be, the crueller they will be for the vanquished. School-generated inequalities have diverse and major effects.

We would thus propose several criteria, several principles that permit the least unfair schooling arrangements, if not perfectly fair ones, to be defined. This already represents a major renunciation, and a high and new ambition. One such principle, the meritocratic one, is essential because it is at the heart of French republican

tradition while structurally linked to democratic society. This model of fair competition has not yet been fully realised, and we should probably work toward that end. However, it is also necessary to be aware of the limitations and contradictions of the meritocratic model, conscious of the fact that it cancels out other approaches to fairness that are just as worthy and desirable, especially from the point of view of the least advantaged pupils.

This is why we need to mobilise other principles of justice and combine them with the meritocratic model. Equality of scholastic results is a justice principle in itself, calling for a degree of positive discrimination so as to ensure greater equality of opportunity. But this policy orientation is necessarily limited, as it imposes restrictions on freedom. This means that access to scholastic goods deemed basic and indispensable – more bluntly put, a “scholastic minimum wage” with intrinsic value – must be guaranteed to all. Scholastic ranking is inevitable and probably necessary, but it cannot be done at the expense of the weakest. Fair schooling must also keep watch over the instrumental value of all educational degrees, while ensuring that scholastic inequalities do not in turn produce strong social inequalities. Lastly, a fair competitive system, such as the meritocratic system of equal opportunity, must not treat the *vanquished* badly, even if the competition is understood to be fair. Fair schooling cannot be the fruit of a single justice principle. It can only be the more or less stable product of a combination of intersecting principles, while working to attenuate their respective effects. And it goes without saying that these principles and their associated trade-offs are to be debated in a far wider world than that of the school.

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## Enlarging the Scope of Public Policy Through Reflection on Context

*Richard Teese and Stephen Lamb*

### INTRODUCTION

Theories of inequality in education offer more or less scope to public policy. They expose a field to intervention which may be relatively confined or more extensive, depending on what structures, processes and activities are identified as salient and also accessible to policy.

Of course, it is not theories which drive policy, though they can be influential and also useful to politicians — useful in ways not necessarily faithful to the limitations of research itself, as Goldstein and Myers remark in the case of school effectiveness research (1997). However, even at the risk of political distortion or ‘hijack’, it remains important for theorists to present a field of endeavour to policy-makers and administrators, based on research findings and theoretical reflection.

Theories of social reproduction would seem, on the face of it, to offer very little scope to policy, or at any rate to *educational* policy. They belong to a broader class of reflection reaching back to the Coleman Report (1966) which attributes relatively little influence over achievement or status attainment differences to educational resources and practices per se (Coleman *et al.* 1966; Jencks 1972). The imperative of changing the social environment still echoes in the words of Basil Bernstein, “Education cannot compensate for society” (1977).

Conceiving education as a system of social reproduction, and schools as agencies of “conservation” rather than “emancipation” makes the point even more strongly (Bourdieu 1966). The most well-educated families know how to manage structures (school, stream, and subject options), while governments often seem unable to operate structures effectively and inclusively. Families with social power use education as a system for staking claims on status, life-style, income and occupations. Families without social power rely on governments to assert these claims on their behalf or to compensate them for unenforceable claims. Governments frequently fail their poorer citizens because social claims on educational success are determined by cultural systems of curriculum, teaching, and examinations whose demands favour the children of educated families and the schools attended by these children. Governments are the trustees of this culture which is made authoritative through the hierarchical organisation of school

programs and university courses, and through statutory bodies, like examination boards, charged with codifying the curriculum and administering tests and examinations.

How could governments operate these bureaucratic structures in favour of poor families when the very nature of the objectives which drive the codification of knowledge and its academic transmission is to differentiate and to select according to a cultural model of learning and the learner derived from a socially advantaged milieu? Moreover, since children from advantaged homes are compelled to compete against each other, the outcome of a more generalised competition involving disadvantaged children as well will inevitably be interpreted as due to merit. This is so even though the circumstances under which competition is organised may be very unequal and the very criteria of success favour one group of competitors. As the trustee of merit, government is compromised from the beginning. Any action it takes to reduce cultural bias in scholastic demands or social bias in the conditions of learning will be interpreted as anti-competitive and as destructive of merit and of the incentives to merit.

Stated in these bald terms, the theory of social reproduction in education would appear to offer little scope for policy beyond compensatory measures for the disadvantaged. Indeed it seems that the very tools that governments have developed at least in part to redress disadvantage have enlarged the scope for strategic action by advantaged families. The creation of new curriculum streams or subject options, the wider use of school-based or coursework assessment, devolution of management to schools, de-zoning of catchments, greater accountability and transparency through public reporting, all these measures have promised better quality and equity, but have delivered more flexibility and mobility to better-off families and produced more isolation and segregation of poorer families.

#### PERSISTENT INEQUALITY AND HISTORICAL PROGRESS

However, theories of reproduction also recognise change. The 'reconversion strategies', highlighted by Bourdieu (1984: 125ff), reveal a situation of growing stress felt by even the socially most advantaged families. Their children, from the time secondary education began to be popularised, were forced into academic competition, if not at lower levels where expansion was initially greatest, then at post-compulsory levels which had become exposed to popular demand. Even the concepts of cultural, economic and social capital are products of a theory, not of inertia, but of *reproduction in the context of change*. French middle-class families whose capital lay in a small business (a shop or a workshop) were made vulnerable in the post-war decades by the emergence of large retail outlets, business mergers, and cheap imported manufactured goods. Their lack of cultural capital and failure to invest more in education as a conversion strategy condemned them to historical decline as a class fraction in contrast to families whose ascent was based on business services and new technology and involved greater participation in education.

Structural change in education has allowed major changes to occur in levels of participation. This has occurred over successive waves of reform – lower secondary



education, upper secondary education, and higher education, including vocational and technical education at various levels. If the ways in which structures have been reformed to expand participation has also enabled them to be manipulated to reassert social advantage, the educational activity of the population has nevertheless risen very significantly. By 2002, over four in five young people in OECD countries graduated from upper secondary education (OECD 2004). While reproduction theory has focussed on the stratification of opportunities and outcomes which mass structures continue to support, it also highlights the fact that the social conflict underlying this has generated higher and higher general levels of education in the population.

Moreover, it can be shown that at least in some OECD countries, these rising levels of educational participation involve improved access to areas of school knowledge which have long been the basis for strategies of social advantage. In other words, we are not witnessing simply a saturation of certain levels of education, an inflation of credentials, and a migration of 'status conflict' to higher levels of education. Within this process, there has also occurred a partial colonisation of the curriculum once monopolised by the most educated families.

To take one example, over the period 1967 to 2005 the proportion of Australian teenagers completing school rose from around 24 per cent to over 80 per cent (see Figure 13.1). Taking any two points in this trend, analysis of participation in more academic subjects shows considerable social inequality (in both enrolment rates and relative achievement). While studying these patterns is important in seeking to expose barriers to the curriculum and to successful learning, attention also needs to be paid to the rising base of completion.

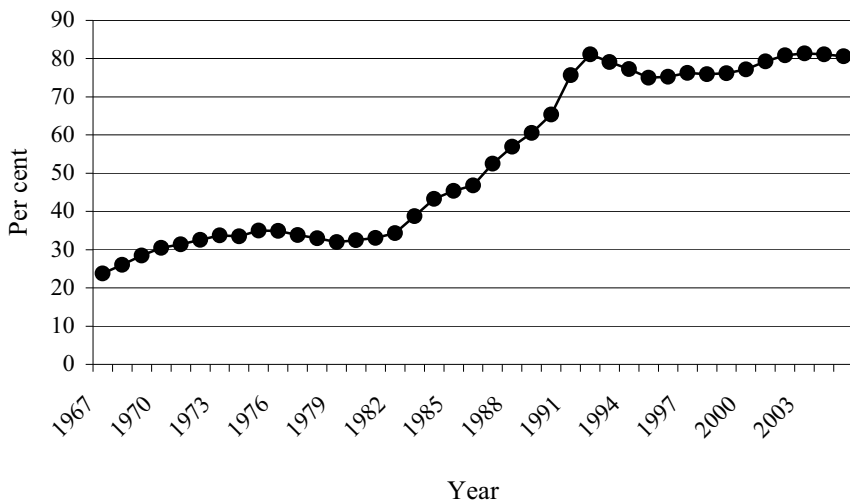


Figure 13.1: Reaching Final Year of Upper Secondary Education, Victoria 1967-2005

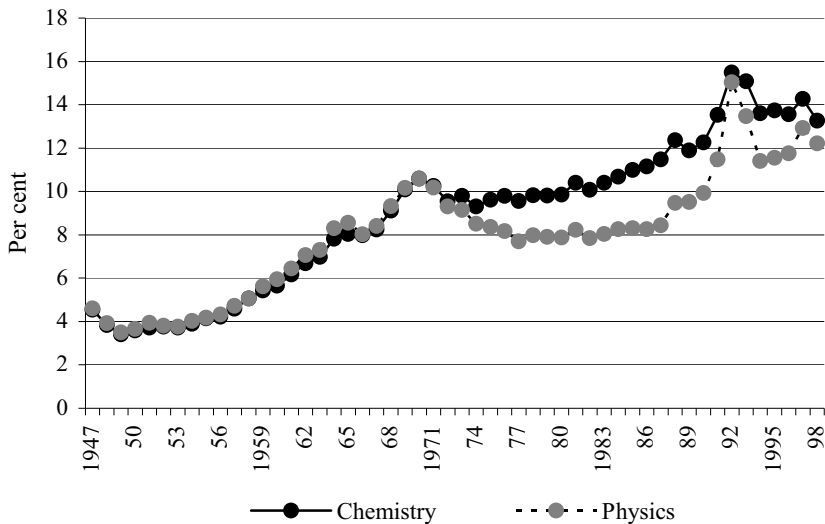


Figure 13.2: Age-cohort Reaching Final Year of Secondary School and Studying Chemistry or Physics, Victoria, 1947-1998

More and more young people complete school and are available, at least potentially, to study subjects such as chemistry and physics. As school completion rises to near-saturation levels, participation in such subjects tends to fall and this typically occasions an outpouring of concern over the ‘decline in sciences’. It is a pattern which reinforces the belief that ‘massification’ can only occur through a decline in standards and a dumbing-down of the curriculum. But if enrolment rates in chemistry or physics or in university-preparatory mathematics are adjusted for school completion, quite a different picture emerges (see Figure 13.2).

Massification is accompanied by a rising proportion of the *age-group* tackling the ‘hard options’. In the 1950s, only about 5 in 100 young people finished school and were enrolled in a chemistry or a physics class in their final year. In other words, school knowledge of the physical sciences at a university-preparatory level reached only about 1 in 20 of an age-group. By the late 1990s, the growth in participation in upper secondary education was such that between 12 and 13 per cent of an age-cohort finished school and took one of the physical sciences. The penetration of this element of academic culture into the social experience of young people was more than twice as great as in the 1950s.

While part of this growth was due to increasing proportions of children from more educated families taking subjects like chemistry and physics — above all, girls — part of the growth also came from working-class students (Teese and Polesel 2003). This was not sufficient to eliminate social relativities in participation (still

less in achievement), but it did involve an absolute gain in the form of improved participation in the 'hard options'.

This example of persistent inequality being compatible with historical progress is important because it shows that structural barriers are not impermeable. The fact that educational growth does not eliminate social gaps does not mean that no gains occur in an absolute sense. However, it is by exposing these barriers to greater change that reproduction theory enlarges the scope for policy intervention. Limited improvements in social access to the most discriminating parts of the upper secondary curriculum pose the question why growth in participation at this level of schooling does not translate into much greater equality in access to the hierarchy of the curriculum and to improved relative achievement at different levels of this hierarchy.

It is a historical irony that the visibility of the structural barriers to equality which were made prominent by social research in the 1960s and 1970s has lessened, thanks to research and policy reacting in later decades to the underlying pessimism in this earlier work (see Reynolds 1993: 1). School effectiveness research, in seeking to re-establish the importance of school, has tended to push structural barriers into theoretical obscurity. The risk associated with this tendency is to relativise expectations around what is achievable *given institutional and social context*, rather than challenging 'context' itself and pursuing a more ambitious program of reducing social gaps. Policy-makers have shown themselves only too ready to accept this risk. For it provides a practically unlimited field for political point-scoring against 'failing schools', now denied access to 'excuses' about the pupils who rule them and the catchments that dominate them.

Exactly how and what is bracketed out by a near-exclusive focus on schools is worth discussing as a way of restoring the visibility of structural barriers and developing broad policy directions to tackle these. We shall look at two major types of abstraction through which 'context' has been bracketed out of the policy domain, thanks to a combination of reactive research focussed nearly exclusively on schools and government policies which have exploited this research emphasis as a substitute for a wider and politically more demanding agenda. Firstly, we consider abstraction from the *institutional* settings in which schools operate, and secondly from *socio-spatial* settings.

#### ABSTRACTION FROM INSTITUTIONAL CONTEXT

The first abstraction from institutional setting consists of a bracketing out of *curriculum*. Largely ignored in school effectiveness research (but cf. Mortimore 1993: 160), curriculum also represents a point which politicians have been reluctant to address, fearing a backlash denouncing dilution of standards and dumbing down. Ignoring curriculum amounts to postulating that mandated courses of study make uniformly manageable demands on all students (at least within a margin of adjustment available to schools) and that the hierarchy of cognitive demands in a subject is simply a function of the structure of the 'discipline'. In research terms, this postulate means accepting curriculum as a fixed and unproblematic feature of the

educational landscape. Since *all* schools have to deliver *the* curriculum, this can safely be considered a constant. The question then reduces to one of differences in how the curriculum is organised within schools.

The policy effect of this postulate is to quarantine the curriculum from systematic pedagogical and social evaluation. No steps are taken to investigate whether a given course of study is equally teachable at all sites within a school system and to students from all backgrounds at each site. To what extent is a subject teachable, both widely and well? Raising this question is left to individual teachers to answer and also, therefore, to draw their own conclusions about the limits of pedagogical possibility in the settings under their control.

Removing curriculum from public scrutiny is achieved by policy-makers in different ways. A course of study can be developed as a general design only — a set of guidelines plus supporting materials — and is left to schools to elaborate. This concession to local needs and responsiveness comes at a considerable price in the form of widely varying interpretations and divergent expectations, conditioned by perceived pedagogical and social limits. On the other hand, a course of study may be fully prescribed, specified in great detail and prohibiting all but minor variations. While this approach generates universal expectations through a defined syllabus, it is typically unsupported by evaluation and accreditation processes which test teachability and accessibility. This enables the syllabus to operate in quite different ways, depending on the context, leading to higher or lower rates of enrolment (if the subject is optional) or to strategies of containment and manipulation (if it is mandatory). But the lack of evaluation allows social access and outcomes to be ignored, and thus relativities to thrive.

Equally important is another and related policy postulate regarding teacher training. This asserts that a uniformly similar approach to the training of teachers ensures that students from all social backgrounds have equal access to the demands of the curriculum. The institutions responsible for the training of teachers do not systematically evaluate their programs from the perspective of the effectiveness of graduates in the widely varying contexts in which they teach, still less their relative effectiveness for different sub-groups of pupils at or across different sites. The operation of this policy assumes that teachers successfully adapt to context and that in all contexts successful adaptation occurs. This flies in the face of years of research on teacher mobility and turnover (e.g., Lèger 1983; Thomson 2002), but remains one of the most important foundations of public policy in school education.

Failure to assess the adequacy and effectiveness of teacher training opens the way to a communication of academic values from the lecture theatres of undergraduate programs to the classrooms of schools, that is, a subordination of one setting to the other, as if these two sites were essentially the same. If the relationship between teacher and school pupil can rarely descend to the extreme academic form of magistral elevation, charisma and the exclusive privilege of speaking, student dissatisfaction with their instructional experience is nevertheless widespread and is not randomly distributed across student populations (Teese, Helme, Lamb and Houghton 2006). In Australia, high school students tackling a terminal mathematics subject frequently complain that their teachers are not good at explaining concepts

and procedures, fail to make the subject interesting, give too little feedback on assessment, and provide inadequate individual attention.

But are these not the same imperfections displayed in university lecture theatres? Dissatisfaction grows as achievement weakens. For the pedagogical model relayed from university to school poses the greatest threat to the students who rely most on their relationship with their teachers. It is universities which impose on students the model of independent learning which discounts pedagogical effectiveness, minimizes instructional interaction, assessment feedback and instructor accessibility, and measures productivity by student grades with little or no reference to teacher inputs or course design objectives (for a discussion of the university student views of the good lecturer, see Ramsden 2003: 87). This is the model which finds its way into the classrooms of schools, where learners are even more dependent and vulnerable. It is a model which imposes itself, not by force of circumstance, but by public policies which charge universities with teacher training (on the grounds of academic rigour and discipline expertise), but provide no framework for assessing effectiveness, beginning with feedback from the schools which employ teachers and from the students assigned to their classes.

These postulates are examples of how education policy is disarmed by conceptually removing schools from the institutional and social relationships which make up their history — in effect, ignoring the sources of their programs, their pedagogical values, their teachers and their students. They are viewed outside of time or at any rate are seen only at a fixed moment in time. Under this approach, schools have no history. They are not laden with purpose through the relationships they have with other institutions and with different social strata. Abstracted from institutional contexts, they themselves become abstractions.

#### ABSTRACTING FROM SOCIO-SPATIAL CONTEXT

But an equally efficacious means of disabling policy is to remove schools from social space — the social geography in which they are located at a given moment in time. School effectiveness research performs this abstraction by endeavouring to neutralise the influence of neighbourhood environment or social intakes through sample design and statistical modelling. The aim is to estimate school effects net of environmental or intake influences. But the risk associated with this approach is that only the more obvious influences are bleached out, while other aspects continue to shape the performance of schools, but unobserved (Lupton and Thrupp \*2007).

These aspects include differential selection on ability lines, self-selection based on cultural values and preferences, the proximity of other schools and ‘divisions of labour’ between schools, and differences in the nature or complexity of disadvantage in catchment zones. Insensitivity to these aspects in research design has the effect of isolating schools from the spatial context they serve. It concentrates attention on the ways in which schools differ in organisational terms, climate, leadership, program emphasis and discipline policy, and also opens the way for a micro-analysis of classroom and teacher effects. While achieving this focus is important, the result of

detaching schools from their socio-spatial context is to remove from the scope of public policy a range of aspects which may require intervention.

That this simplification of the policy agenda is attractive can be seen in the fervour with which market-based reforms have been embraced. If schools can be shown to be relatively independent of the social space they occupy, a more aggressive policy of school-based improvement can be pursued, involving league tables, humiliating publicity, tight timelines for reform, and the threat of closure. In this, everything depends on a framework of measurement and benchmarking in which schools can no longer appeal to their context to excuse under-performance.

Added to this drive to abstract schools from spatial context has been a lack of policies to address the qualities of context itself — housing, employment, transport, leisure and recreational facilities, access to human services, and community cohesion. This is the deeper risk of efforts to focus on the relative effectiveness of schools. Not only are schools artificially detached from their environments through inadequate specification of relationships, but the nature of the environments themselves and their impact on absolute differences in educational opportunities and outcomes is ignored. A situation is created in which the sole object of public policy is the performance difference between two establishments ostensibly serving the same population.

Public policy is thus disarmed by a double abstraction — from time and space. On the one hand, schools are viewed in isolation from the institutional relationships and the cultural values which constitute their living history. On the other hand, they are viewed in isolation from the complex relationships with the communities that form their contemporary social space. The result of this double abstraction is to disempower public policy by depriving it of the objects and the tools of structural reform.

## TOWARDS AN AGENDA OF POLICY REFORM

If the emphasis of public policy should be on the relationships which schools have with other institutions and with their communities — before, that is, internal relationships can be durably improved — it follows that the scope of policy has to be considerably enlarged and that efforts across portfolios of policy and administration also have to be coordinated.

In this section, we set out some broad policy directions aimed at enduring reform. We begin with policies to change the environments in which schools operate, the range of services which schools provide (given those environments), and the provision philosophy of education authorities (also given the nature of school catchments). We then turn to pre-school provision and compulsory education, and the funding of innovation in disadvantaged schools. Our focus then shifts to curriculum, teacher training, teaching practice, and finally the incentives for boosting student engagement in learning.

1. *Social and economic policies to reduce environmental disadvantage.* We assume that school policies to reduce educational disadvantage are part of a wider package of measures to improve quality of well-being and the economic livelihood

of families in disadvantaged communities. Attention to the socio-spatial context requires a range of non-educational policies to redress disadvantages in income, employment, housing, transport and health which accumulate in the catchments of the 'exposed' sites in a school system and which schools battle against in a very unequal fight.

2. *Access to medical, social and psychological support services.* Full attention to socio-spatial context means understanding and tackling differences in the preparedness of children for school at different sites in a school system. In 'exposed' sites, children have frequently had little or no pre-school access and sometimes present with severe social needs (malnourishment, ill-health, psychological disturbance, behavioural problems). The work of primary teachers is diverted to addressing these needs which must be met if successful classroom learning is to occur. The lack of medical, psychological and social counselling services undermines the work of teachers at those sites in the school system and at those points in the developmental sequence where intervention is most needed. To overcome this lack, schools should be able to draw on a network of community-based services, readily accessible and in some cases provided on the sites of schools themselves.

3. *Community-based, not market-based provision.* As we have emphasised, not all locations in the space represented by school systems are equal. Some sites are fortified, others are exposed (Teese 2000). Exposed sites involve multiple disadvantage – an adverse relationship in a local division of labour between schools, small size, severe constraints on resource flexibility, high teacher turnover, difficulty in attracting good teachers, a high proportion of inexperienced staff, and weak links to the local community (for a contemporary British summary, see Bell 2003).

From the limited international evidence, it appears that market policies either do not relieve this situation or actually promote it by facilitating the choices and mobility of more advantaged families. If it is important that schools have autonomy, it is even more important that whole communities have choice. Policies for choice are oriented to individual families. This means that they will articulate cultural and economic differences between families when the point of public schooling is to pool resources. Provision policy should be community-based, not family-based, and it should aim at ensuring that any given community is served by a range of equally well-resourced schools, whatever their differences in programs.

4. *Funding of private schools to supplement, not weaken public education.* Policies regarding the funding of private school vary widely internationally. But there is a general consensus that where subsidies are paid, the *quid pro quo* is the delivery of a public service, access to which is unconstrained by fees, limited location, or confessional affiliation. Where, despite these policies — or in their absence — such establishments remain free to pick and choose their students, public finance is being used to segregate populations and to subsidise strategies of private advantage. This undermines the viability of public schools, which in turn require additional funds to compensate for their intakes, while diminishing their local reputation and further reducing demand for them. This does not represent a coherent public policy.

5. *Access to good quality pre-schooling.* The evidence that social inequalities in achievement appear early and have lasting effects (Feinstein 2003) points to the need for early and intensive intervention, beginning with the provision of accessible, but high-quality pre-schooling. This will not prevent social gaps in achievement from widening. But it may improve learning growth for disadvantaged children and thus result in smaller gaps in the long term. Sustained improvements in rates of growth imply both *continuous* intervention and targeting of support to *children* — not families as such, nor schools, but children in schools (Feinstein 2003: 90).

6. *Tackling the achievement gap in the compulsory years.* The evidence that learning gaps between social groups do not weaken over the course of schooling and may even widen bears out the claim of reproduction theory that schooling operates more to articulate differences than to reduce them. This brings into question both the ‘vertical’ and the ‘lateral’ sources of differentiation which account for the widening gap.

The relative location of a primary school in a school system is associated both with external disadvantages in environments and intakes, but also with the impact of these disadvantages on the level of teacher expectations and the priorities they set. Children in poor schools have less access to the hierarchy of cognitive demands that constitute the primary school curriculum because their prior experience of learning is more often inadequate for managing these demands and absorbs the attention of their teachers in effectively remedial teaching.

Just as it can be said that teachers in disadvantaged schools are forced to lower their expectations and ‘divert’ time to basic skills and behavioural objectives, so it can also be said that this is because disadvantaged children themselves have had ‘less’ time in their early childhood on the home activities which stimulate high cognitive growth amongst advantaged children, those who subsequently set the pace for school learning (for a discussion of time and the acquisition of cultural capital, see Bourdieu 1986). Schooling places poor children in permanent ‘catch up’ mode, while children from better-off families are normally in ‘extension’ mode.

The ‘vertical’ disability of reduced access to high cognitive demand in primary school can only be overcome by more individualised and intensive classroom support, beginning with early identification of learning difficulties. This also means addressing the ‘lateral’ disabilities arising from the socio-spatial environment, including the typically narrow financial base of a school, the high turnover of teachers, and heavy reliance on inexperienced teachers. The policy implications are that funding models should be structured to concentrate greater per pupil expenditure in disadvantaged schools and that resource policy gives more stable staffing and more experienced teachers to these schools. This is in the context of setting higher expectations, based on realistic conditions. We deal with the qualitative side of resources further below.

7. *Needs-based funding: support for innovation, not compensation.* Funding models have to be sensitive to differential location within system hierarchies. Formula-based funding of public schools assumes an average social and minority-group intake to schools, perhaps adjusted for size. While supplementary funding is frequently offered to compensate where this assumption does not hold, both the



level and the targeting of these funds may not be appropriate or optimal. Moreover, if the funds represent a more generous staffing formula rather than additional cash, there is no assurance that the extra resources are accessed by the students who most need them or that they are deployed in activities of demonstrable benefit. How resources are used might be more important than the quantity of resources (Gamoran and Long \*2007). But unless resources are tied to programs, with both access and outcomes measured, it is difficult to assess 'what works' and therefore to generalise benefits beyond a given site. The funds that are released under these constraints should be employed to innovate and produce generalizable benefits rather than simply compensating for home disadvantage. This implies a substantial and concentrated commitment of funds rather than a supplementation so low as to involve no real expectation of change (or change of a purely relative and marginal kind only). A more ambitious view of the role of supplementary funding begins with the recognition that much of the early career training of teachers occurs in hard-to-staff schools. These act as training nurseries for whole systems, only to lose much of the training effort through high rates of turnover. In this respect, poor schools subsidise rich schools by supplying early career training, while too rarely enjoying the benefits of this themselves (Lamb and Teese 2005: 134).

8. *Pedagogical assessment of school curricula.* The curriculum is a vehicle for asserting cognitive and implicit cultural demands on students and for differentiating between students, based on how well they respond to and manage these demands at the sites they occupy in a school system. Specialisation in subjects, streams or tracks in secondary school enables students to be grouped in a hierarchy of knowledge and learning. Maintaining this hierarchy is a pervasive goal of education. This is partly because of the values and perceptions of teachers themselves regarding what constitutes knowledge and what constitutes good learning, and partly because the hierarchical curriculum is a vehicle for social differentiation and is more or less explicitly seen as such by both teachers and parents. While this goal dominates activity, schools will continue to classify and select, and the scope for reducing social selection is accordingly limited. This depends in part on how stratified the school system itself is. For the scope for social differentiation through the curriculum is magnified by the extent to which schools are able to specialise in what they offer and in whom they offer programs to.

Many education systems have sought to delay specialisation in subjects or streams and also to prevent early relegation to vocational or general tracks. Valuable as this is on both educational and social grounds, it does not prevent selection on academic criteria from occurring. For in secondary schools, even common and compulsory programs are constructed from academic disciplines and are staffed by specialists whose status rests on their subject-expertise. Moreover, such programs usually contain options enabling differentiation, and students may be grouped on ability or 'option' lines in some or all of the subjects they take.

Curriculum is a *structural* barrier to equity because of the functions of academic and social selection it performs, *regardless of its particular hierarchical configuration*. Delaying specialisation does not impede the performance of these functions, just alters the form in which they occur and their timing. If it is important

to 'gain time' — by creating less segregated and hierarchical systems — this can only be because we have the design and teaching skills needed to moderate the link between academic and social selection. Severing this link is the goal of equity, not ending selection as such. To sever this link requires understanding how it is fashioned through the construction of school subjects, both as design entities and as teaching entities. This, in turn, requires ongoing monitoring and evaluation of school subjects.

Curriculum is a test of students. But what is the test of the curriculum? (Teese 2000: 9). We usually try to answer this in terms of the knowledge required in life. While the necessarily vague answers to this question are interminably discussed and recycled, there is one test that needs to be applied urgently. What is teachable, both widely and well? This is a pedagogical, not an epistemological test. Unless school programs are put under constant *pedagogical* review, we cannot identify the barriers to good teaching and learning in the multiple and varied sites that make up a school system. If these barriers cannot be identified, neither can we train teachers to reduce them. Whatever hierarchical form a curriculum takes, equity requires that subjects be as accessible as possible — explicit and defensible in their design objectives and learning criteria, valid, reliable, and theoretically grounded in assessment practice, and tested for the manageability of concepts, learning strategies and procedures in different school settings. In an age of mass economic dependence on school, the pedagogical test of the curriculum — what can be taught well and widely? — should be the first instrument of policy to improve equity.

9. *Integrating accountability for curriculum design and delivery.* The institutional gap between curriculum design and program delivery has to be bridged. Historically the design of syllabuses has resided with universities or later with university-dominated boards without accountability for school performance. This severance of roles may operate even within formally integrated education authorities through stakeholder influence and divisions of administrative powers. So long as arrangements are maintained which prevent curricula from being tested in terms of teachability and student accessibility, the scope is also maintained for systematic social discrimination through the curriculum, and implicitly the assertion of social and institutional power through school knowledge. The principle should be, Who designs programs, teaches them, and what and how they teach is evaluated.

10. *Teacher training: assessment and accountability.* Another institutional gap that needs to be bridged separates the training of teachers from the contexts in which they will work. Both the undergraduate academic education of teachers and their post-graduate professional training (where these are separate) influence the ways teachers work in schools. Thus it is not likely that major improvements in quality of teaching in schools can be achieved without major improvements in university teaching, both at undergraduate and post-graduate levels. This is not to deny that good teachers develop effective styles which, if anything, are a reaction to and a rejection of the frequently poor teaching they were exposed to as undergraduates. Rather it is to stress that this places too much reliance on individual responsiveness and commitment in greatly varying sites, where opportunities for mentoring and self-reflection are often very limited.

11. *Teaching practice: appraisal and consulting the student.* The double abstraction from institutional and spatial context has tended to reduce public policy efforts to discovering the organisational sources of 'value add' and to improving teaching. This is particularly so where policy-makers have been confronted by extreme estimates of teacher effects (as in Australia, see Teese 2004). But even when policy-makers have been relieved of much of the real burden of improvement and the more redoubtable challenges of equity and quality, the goal of stimulating 'good teaching' and having good teachers in every school seems elusive. If this is due in no small measure to research designs which contain no teacher variables, it is also the case that both the academic culture of universities and the hierarchical social relationships in schools inherited from this largely exclude the student perspective on what constitutes 'good teaching'.

Without systematic and ongoing measurement of quality of instructional experience — as perceived by learners — it is not possible to change pedagogical culture or to reform teacher education. Teacher-centred approaches involving transmission of content over conceptual mastery, limited interaction, lack of comprehension of assessment tasks, poor feedback, and learner isolation (including from peers) will continue to plague the classrooms of mass upper secondary education, and indeed below this level (for the junior years, see Mortimore, Sammons, Stoll *et al.*, 1988: 239).

12. *Student engagement: economic incentives for learning.* Consulting the student represents a break with traditional relationships of dependency and authority, already weakened by years of change in intakes and the wider cultural environment. Responding to the student perspective requires at the very least an appreciation of learning preferences involving shared tasks and practical activities and outcomes without which the transition to theoretical work and private study in the later years of school becomes so much more difficult (Teese and Polesel 2003: 95-117). But managing the cognitive shift which secondary schools impose on students from all social backgrounds also means creating explicit economic incentives to learning as well as the more diffuse cultural benefits which currently justify programs.

If students are willing to accept abstraction and remoteness in subject content, at least in some areas (e.g., mathematics), they need to have confidence in the economic value of the programs of study of which these subjects form a part. How can malaise and disengagement be addressed if programs — not subjects as such — do not confer demonstrable advantages of employment or further education on students, particularly for low achievers? Equally, responding to the student perspective involves recognising the need for breadth of program options and for choice between options as a basis, in turn, for student commitment to study. The choice should not be between elevation and demotion. Every option should have strong economic incentives as well as offering a positive differential appreciation of student learning strengths (e.g., not necessarily 'academic').

## TAKING EDUCATION AT ITS WORD

In seeking to widen the scope of public policy in education by tackling structural barriers and the cultural practices these support, we are arguing for changes that take education at its word. If, for example, a school subject is worth teaching, it is worth teaching widely and well, and should be tested on these measures. If the training of teachers is good for exposed as well as fortified sites, that, too, should be tested, and changes made if the training fails. If teaching is a two-way process which demands the learner's commitment, then quality of teacher practice should also be assessed, including by students themselves. If schools need extra funding, that should be targeted and should be ample enough to promote generalizable programs of proven worth, not simply compensate for unfavourable intakes. If subsidies are paid to private establishments on the argument that these perform a public service or relieve the public system of performing the same service, that should not come at the cost of damaging the environments of the children in public establishments.

Measures that address both the institutional and the spatial context of schooling — curriculum, teacher training, teaching practice, program provision, funding, services — all aim at equity through quality. That is, they directly address the problems of achievement as these might be experienced by *any* child and without prejudice to any child, including the most able. If the measures broadly outlined above conform to this principle, then taking the path of equity will lead to higher overall quality as well as smaller gaps between advantaged and disadvantaged.

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## Index of Names

- Abbott, I, 156  
Adelman, C, 170, 171, 172, 173,  
174, 176  
Adelman, N, 250  
Adler, M, 40, 42, 43  
Ahier, J, 156  
Ahluwalia, M, 231, 232  
Alexander, K, 131  
Altbach, P, 218  
Angus, L, 102, 118, 120  
Anyon, J, 110, 119, 124, 125  
Armor, D, 131, 145  
Arum, R, 181  
Ashenden, D, 241, 242, 243  
Ashton, D, 132  
Asthana, S, 40, 42  
Australian Bureau of Statistics, 6, 8,  
12, 15, 17, 165
- Bailey, D, 170  
Baldwin, G, 7, 35  
Ball, S, 39, 40, 46, 109, 250  
Barnett, W, 131  
Barth, R, 250  
Bartlett, W, 39  
Bascia, N, 250  
Beasley, B, 242  
Beaud, S, 283  
Bell, D, 112, 113, 114, 301  
Bernstein, B, 151, 293  
Berry Cullen, J, 97  
Berry, B, 97, 131  
Bettinger, E, 76, 101, 102  
Betts, J, 102, 131  
Bhalla, S, 212  
Blunden, R, 152  
Borden, V, 171, 172, 181  
Bourdieu, P, 277, 278, 279, 288,  
293, 294, 302  
Bray, M, 224  
Brint, S, 174, 181
- Broh, B, 145  
Brown, B, 39  
Brown, C, 130, 131  
Brown, P, 110  
Brown, S, 124  
Bryk, A, 25, 130, 134, 172  
Burke, G, 7  
Butts, R, 3  
Byrne, D, 42
- Caldwell, B, 5, 32  
Carey, K, 171, 172, 182  
Carnoy, M, 70  
Champagne, P, 278  
Chapman, C, 121, 122  
Chauvel, L, 283  
Cheng, K, 189  
Clark, D, 34, 158, 159, 160  
Claydon, L, 3  
Cobalti, A, 156  
Cochran-Smith, M, 250  
Cohen, J, 135  
Cole, P, 243  
Coleman, J, 130, 145, 172, 293  
Collins, C, 26  
Comber, B, 103, 246  
Comber, L, 103  
Commonwealth Schools  
Commission, 4  
Connell, R, 4, 241, 242, 243, 250,  
251, 285  
Connolly, P, 55  
Cotton, K, 24  
Croninger, R, 132  
Croxford, L, 44, 47, 48, 61  
Crozier, G, 246  
Currie, J, 144
- Danenberg, A, 131  
Darling-Hammond, L, 131, 250  
Datnow, A, 251

- Davies, B, 109, 250  
 Davies, N, 109  
 de los Santos, A, 171  
 Deaton, A, 102  
 Dedrick, R, 132  
 Dekkers, H, 260, 265, 271  
 Deller, S, 29  
 Desai, G, 218  
 Dev, M, 233  
 Diamond, J, 145  
 Dornbusch, S, 130, 131, 132  
 Dougherty, K, 174  
 Downey, D, 145  
 Dreze, J, 213, 223, 224, 225  
 Driessen, G, 258, 259, 260, 263, 265, 266, 268, 269, 271  
 Dubet, F, 278, 279, 288  
 Duncan, T, 144  
 Duru-Bellat, M, 277, 283, 288  
 Dutta, D, 219  
  
 Echols, F, 40, 46  
 Edwards, T, 164  
 Elkins, J, 246  
 Ellwood, D, 169  
 Entwisle, D, 131  
 Epple, D, 75, 102  
 Erikson, R, 176, 289  
  
 Farkas, G, 145  
 Fase, W, 267  
 Feinstein, L, 302  
 Felix, C, 272  
 Ferguson, R, 145  
 Field, K, 171, 182  
 Fini, R, 156, 166  
 Fink, D, 121, 251  
 Fiske, E, 96, 225  
 Fitz, J, 42  
 Fowler, W, 25  
 Freidus, H, 251  
 Fryer, Jr, 135, 145  
 Fullarton, S, 26  
  
 Gallimore, R, 132  
 Gamoran, A, 62, 181, 303  
 Gándara, P, 131  
 Gauri, V, 101, 102  
 Gewirtz, S, 40  
 Ghosh, J, 232, 233  
 Ghosh, S, 214  
 Gibson, A, 40, 42  
 Gijssberts, M, 269  
 Gillborn, D, 117  
 Goldenberg, C, 132  
 Goldrick-Rab, S, 173, 174, 175, 176, 177, 178, 179  
 Goldstein, H, 25, 42, 293  
 Good, H, 153, 155  
 Goodlad, J, 250  
 Goodson, I, 151, 152, 156, 164  
 Gorard, S, 41, 42, 46, 51, 123  
 Govinda, R, 224  
 Gray, J, 121, 251  
 Green, A, 231  
 Greinert, W, 155  
 Grisay, A, 278  
 Guo, G, 131, 132  
  
 Hallam, S, 116  
 Halpin, D, 1, 164  
 Hannan, W, 3  
 Hanushek, E, 131, 172  
 Hargreaves, A, 250, 251  
 Hargreaves, D, 41  
 Harrington, M, 7  
 Harris, A, 41, 121, 122, 131, 132  
 Harris, K, 41, 121, 122, 131, 132  
 Hattam, R, 246  
 Hedges, L, 131  
 Heller, D, 173, 176  
 Helme, S, 34, 298  
 Hickox, M, 164  
 Hindu, The, 209, 210, 212, 235  
 Hirsch, D, 39, 42, 43  
 Ho, E, 110  
 Hoachlander, G, 174

- Hoffman, C, 131  
 Horn, L, 174  
 Hout, M, 181  
 Hoxby, C, 67  
 Hsieh, C, 8, 75, 77, 93, 102  
 Hubbard, L, 251  
  
 Iedema, J, 268  
 Ireson, J, 116  
  
 Jaffrelot, C, 217  
 James, D, 102  
 Jeffrey, C, 217  
 Jeffrey, P, 217  
 Jeffrey, R, 217  
 Jencks, C, 129, 130, 289, 293  
 Jephcoate, M, 156  
 Jhingran, D, 225  
 Johnston, K, 241, 243  
 Jones, G, 44, 230  
 Jonsson, J, 289  
 Josephine, Y, 224  
  
 Kamat, S, 209, 218, 221, 223,  
     228, 229  
 Kane, T, 169  
 Kang, S, 132  
 Kao, G, 131  
 Karabel, J, 174, 181  
 Karmel, P, 3, 240  
 Karsten, S, 257, 272  
 Keating, J, 34, 157, 158, 164  
 Keeves, J, 103  
 Kemmis, S, 243  
 Kendall, L, 114  
 Kenway, J, 26  
 Kingdon, G, 223  
 Kirby, P, 160  
 Klerx, L, 268  
 Kohnstamm, G, 268  
 Kozol, J, 109  
 Kurien, N, 232  
 Kwong, J, 186, 187, 188, 190  
  
 Labaree, D, 152  
 Ladd, H, 67, 96  
 Laine, R, 131  
 Lamb, S, 7, 26, 28, 33, 34, 35, 164,  
     298, 303  
 Lauder, H, 39, 110, 118, 119, 123  
 Lawson, M, 246  
 Le Grand, J, 39  
 Ledoux, G, 262  
 Lee, C, 145  
 Lee, J, 129, 130, 131  
 Lee, V, 25, 33, 129, 130, 132  
 Lèger, A, 298  
 Leseman, P, 268  
 Levin, H, 228  
 Levitt, S, 135, 145  
 Li, D, 186, 190  
 Lieberman, A, 251  
 Lingard, B, 243  
 Liu, F, 188, 189, 190, 191, 192  
 Long, D, 303  
 Long, M, 7, 35  
 Luke, A, 246  
 Lupton, R, 110, 113, 114, 115, 116,  
     117, 125, 299  
 Lytle, S, 250  
  
 Malley, J, 151  
 Mansuri, G, 225  
 Mares, A, 270, 271  
 Marginson, S, 228  
 Martin, C, 159  
 Maynes, M, 153, 155  
 McCormick, A, 170, 171  
 McEwan, P, 70, 102  
 McInerney, P, 246  
 McKay, M, 230  
 McLean, G, 26  
 McLeod, J, 26  
 McNally, S, 114  
 McNeal, R, 132  
 McRae, D, 242  
 Mehan, H, 251



- Meijnen, W, 257  
 Merle, P, 277  
 Merry, M, 263  
 Metz, M, 110  
 Milligan, S, 243  
 Mills, G, 230  
 Mingat, A, 224, 231  
 Ministerial Council on Employment,  
   Education Training and Youth  
   Affairs, 6, 7, 152, 242  
 Mitter, W, 155  
 Mortenson, T, 169  
 Mortimore, P, 297, 305  
 Mukundan, M, 224  
 Mulder, L, 259, 261, 263, 264, 272  
 Munshi K, 226  
 Myers, K, 250, 293  
  
 Narayana, D, 225  
 Nash, R, 123  
 NASSCOM, 208  
 National Center for Education  
   Statistics, 133, 170  
 Nayar, U, 215, 220  
 NCERT, 229, 230  
 Neal, D, 67, 102  
 Nelson, B, 1, 6  
 Newmann, F, 132  
 Ngok, K, 186, 187, 188, 190  
 Noden, P, 42  
 Novak, J, 6  
  
 Ofsted, 112, 113  
 Ogbu, J, 130  
 Olson, L, 131  
 Omvedt, G, 217  
 Orfield, G, 145  
 Organisation for Economic  
   Cooperation and Development, 7,  
   18, 42, 145, 187, 191, 224,  
   286, 295  
  
 Palardy, G, 130, 132  
 Park, E, 132  
  
 Pascarella, E, 172  
 Paterson, L, 44, 61  
 Patnaik, U, 219  
 Phillips, M, 129, 130, 132  
 Plecki, M, 25, 29  
 Polesel, J, 26, 34, 151, 160, 163,  
   164, 165, 253, 296, 305  
 Pong, S, 110  
 Porter, P, 243  
 Power, S, 1  
 Prager, C, 170, 173  
 Psacharopoulos, G, 218  
 Pusey, M, 3, 5  
  
 Quin, R, 243  
  
 Raffae, D, 42  
 Raftery, A, 181  
 Ramachandran, V, 224, 225, 230  
 Ramsden, P, 299  
 Randolph, A, 145  
 Ranson, S, 41  
 Rao, V, 225  
 Raudenbush, S, 25, 132, 134, 172  
 Reardon, S, 131  
 Reid, A, 243  
 Reynolds, D, 44, 119, 120, 121, 297  
 Ringer, F, 153  
 Rivzi, F, 242  
 Roach, J, 154, 155  
 Robertson, D, 110, 228  
 Robinson, L, 123  
 Roderick, G, 44  
 Roeleveld, J, 268  
 Romano, R, 75, 102  
 Roscigno, V, 131  
 Rose, D, 48  
 Roskam, J, 32  
 Rotheron, C, 56  
 Rothstein, J, 101  
 Rothstein, R, 129, 130, 131, 145  
 Rowan, B, 132  
 Rudnicki, E, 29  
 Rueben, K, 131

- Rumberger, R, 130, 131, 170  
 Rust, F, 251  
 Rutter, R, 132  
  
 Sachs, J, 250  
 Sadgopal, A, 229  
 Saihjee, A, 225  
 Sarason, S, 250  
 Sargan, J, 86, 87, 88, 89, 98, 99, 100  
 Schacter, J, 132  
 Scheerens, J, 118  
 Schiefelbein, E, 69, 102  
 Schlecty, P, 250  
 Sen, A, 213, 214, 222, 223, 224,  
 225, 282  
 Shavit, Y, 181  
 Sikora, A, 174  
 Singh M, 207, 218  
 Sizer, T, 251  
 Slavenburg, J, 258  
 Slee, R, 111  
 Smith, J, 25, 33, 102  
 Smith, M, 132  
 Smyth, J, 246  
 Snyder, T, 131  
 Spillane, J, 145  
 State Council, 200, 201  
 Steifel, L, 33  
 Steinberg, L, 130, 131  
 Stoll, L, 121, 250, 305  
 Stringfield, S, 119, 120, 121  
 Suarez-Orozco, C, 131  
 Suggett, D, 243  
 Sui-Chu, E, 132  
 Sujatha, K, 223  
 Swaminathan, M, 234  
 Symons, J, 110  
  
 Tan, A, 131  
 Teddlie, C, 120, 121  
 Teelken, C, 45  
 Teese, R, 26, 34, 151, 159, 160, 165,  
 253, 296, 298, 301, 303, 304, 305  
 Terenzini, P, 172  
  
 Tesser, P, 268, 272  
 Thernstrom, A, 129, 130  
 Thernstrom, S, 129, 130  
 Thomson, P, 110, 119, 239, 244,  
 247, 298  
 Thoreson, A, 131  
 Thrupp, M, 109, 110, 111, 115, 116,  
 117, 118, 123, 124, 125, 299  
 Thum, Y, 132  
 Tienda, M, 131  
 Tilak, J, 217, 218, 227, 228  
 Titus, M, 172  
 Troviksvei, O, 188, 189, 190,  
 191, 192  
 Tsang, M, 186, 187, 188, 189, 190,  
 191, 192  
 Turner, P, 244  
 Turner, S, 170  
  
 UNICEF, 145  
 Urquiola, M, 8, 75, 77, 93, 102  
  
 van den Berg, G, 267  
 van der Werf, M, 267  
 van Langen, A, 269  
 van Tuijl, C, 268  
 van Vught, D, 268  
 van Zanten, A, 286  
 Vasavi, A, 225  
 Veen, A, 268  
 Vierke, H, 269  
 Vincent, C, 246  
 von Hippel, P, 145  
  
 Walford, G, 40  
 Walking Eagle, K, 250  
 Walzer, M, 284  
 Wasley, P, 251  
 Webb, R, 132  
 Weiner, G, 111  
 Weiner, M, 213, 220, 222  
 White, V, 74, 83, 84, 86, 87, 88, 89,  
 94, 95, 98, 99, 100, 104, 105, 136,  
 137, 139, 241, 243

Whiteside, T, 218

Whitty, G, 1, 39, 42

Willmott, R, 111

Willms, D, 40, 110, 132

Winter, G, 7, 137

Wood, D, 251

Woods, P, 40, 42, 43, 250

World Bank, 102, 185, 186, 191,  
218, 219, 232

Wright, I, 171

Youdell, D, 117

## Index of Subjects

- achievement 32, 81-85, 102, 110-114
  - impact of school size 24-31
  - achievement gaps 129-149
  - initial gaps 134
  - early years 132-136
  - kindergarten 132-136
  - gender differences 55
  - race/ethnicity differences 56, 130-148
  - influences on achievement 138-143
  - region 56
  - social origin 24-31, 39-42, 48-55
- Australia 1-38, 151-166, 239-256
- busing 281
- capital
  - cultural capital 40, 64, 294, 302
  - social capital 41, 294
- catchments *see* zoning
- China 185-205
- choice of school 39-41, 43-46, 56, 252
- class size 116, 263
- decentralisation 224-225, 235
- democratic schooling
  - fair schooling 275-291
  - common school 229
  - democratisation 151, 158, 213, 257, 283
- early leaving 33, 78, 203, 215, 261, 265
- educational inequality
  - race 56, 129-149
  - social impact 284-286
  - merit 275-279
  - caste system 207-238
  - structural 215-216
  - regional 56, 190-196, 231-232
  - and development 185-187
- factors influencing 187-190
- gender 55, 197-199
- student mobility and higher education 171-183
- England 39-66, 109-127, 155
- equity programs
  - disadvantaged schools program 239-256
  - cultural minority 259
  - compensation and activation programs 258
  - educational stimulation 258-259
  - educational priority 259-260, 264
  - Municipal Educational Disadvantages Policy 262
  - educational opportunity 262
  - mother tongue instruction 265
  - intercultural 266
  - early years 267-269
- federalism 209, 211
- France 153-155, 275-291
- gender differences 55, 197-199
- gender gap 57, 223
- globalisation, 39, 40, 207-210, 218-224, 233-235
- Great Britain 39-66
- higher education 169-184
  - India, 227-229
  - unequal opportunity 216-218
  - student mobility 169-184
- immigrant children, 256, 259, 263, 267, 269-271
- India 207-238
- Italy 154, 155, 156, 260
- market-based reforms 1-38, 39-66
  - marketisation 3-5

- Netherlands 269-275  
 New Zealand 109
- peer effects 28, 76
- policy 294-307
  - vouchers 67-107
  - market reforms 39-66, 1-38
  - private school funding 5-8
  - reproduction theory and 294-298
  - structural reform 253-255
  - reform agenda 287-290
  - to address inequality 199-204, 251-253
  - early intervention 143-146
  - impact of 264-272, 243-244
  - minimum entitlements 282-284
  - elite bias 212-215
  - addressing regional differences 231-232
  - student mobility 181-183
  - addressing achievement differences 143-146
  - addressing the problem of residualisation 32-36
  - school provision 32-35
  - funding 35-36
- privatisation 5-8, 225-226
- residualisation 2, 10-24, 32-36
- resources 129, 131, 134, 143, 164, 194
- school
  - Catholic schools 6, 12, 13, 15, 162
  - school context 57-61, 109-125
  - school choice 71-77
  - school effectiveness 6, 118-121
  - school improvement 121-123
  - independent schools 6, 15, 25, 35, 48, 62, 152, 162, 240, 241
  - intake 18, 22, 25-36, 108-125
  - private schools 8-10, 71-74, 77-79, 159-161
  - rural 68, 70, 71, 78, 109, 110, 186-194, 200-203, 211-217
  - segregation 61-62
  - school size 1-38
  - social intake 2, 3, 12, 18, 22, 25, 28-31, 60, 62, 300
- social justice
  - fairness 276
  - distributive justice 279-281
  - minimum entitlements 281-283
  - merit and opportunity 276-279
  - school context 109-127
- subject choice 253, 296-297, 305
- teacher
  - expectations 145, 302
  - quality 145, 172, 201, 202, 223
  - turnover 298, 301
- United States 129-149, 169-184
- vocational education and training 151-167
  - European tradition 153-157
  - social segregation 157-160
  - outcomes 160-164
- vouchers
  - school choice 71-74
  - Chile 67-71, 73
  - effects on achievement 81-89
  - stratification 92-97
- zoning 1, 3, 4, 12, 21, 22, 41, 45, 109, 294, 297, 299, 300, 301