

The GeoJournal Library

Past Experience, Current Trends and Future Challenges

edited by

John Lidstone and Michael Williams



Geographical Education in a Changing World

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Geographical Education in a Changing World

Past Experience, Current Trends
and Future Challenges

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FOREWORD

INTERNATIONAL GEOGRAPHICAL EDUCATION PAST, PRESENT AND FUTURE

This text is about geographical education in its widest sense; the contributions are drawn from an international authorship of the highest quality. While the authorship is international, the central concerns of geographical education are global. The role of our subject is increasingly contested in curriculum development from new entrant to tertiary level. But, when there are debates about environmental issues or cultural contrasts at a global, regional or local level, the importance of the subject in schools is seldom challenged. The mission of this volume is to rise above these debates and draw attention to geographies and geographical education at the global level. The sum of value is greater than the total of the parts; the Editors have set up the first section to establish the development of geography in schools, and the second section reports on major regional variations in contemporary school geography. The third looks towards the future with reference to several important issues. The sections offer different things; we need to understand how we have arrived at our contemporary view of geography, and how these views vary. The most important function of *International Geographical Education Past, Present and Future* however, lies in how we read and activate the futures of our subject; while there is strength in our unity of purpose, there is also strength in diversity of approach.

International Geographical Education Past, Present and Future had its origins in a proposal to the Commission on Geographical Education to recognise the importance of the 2006 meeting of the International Geographical Union (IGU) in Brisbane. The text was intended to provide a benchmark statement and prospect for both school geography and geography education for this meeting. The idea of a Brisbane benchmark was timely; the history of international meetings of geographers stretches back well over 100 years, and geographical education has always been on the agenda. The first of a series of geographical congresses was held in 1871 in Antwerp, with the IGU established in Brussels in 1922. Since its early days the IGU has consisted of three major components a General Assembly of delegates appointed by member countries, an Executive Committee and IGU Commissions that continue their work between General Assembly meetings. The Commission on Geographical Education is probably the longest standing of these working groups, and it is currently one of the largest and most active commissions of the IGU.

The Commission itself has had a key role in the promotion of Geography. It has an established practice of meeting independently of, but in association with, the IGU

Congress (held every four years with the last meeting in Glasgow in 2004 and the next in Tunisia in 2008) and the IGU *Regional Conferences* (held in Durban in 2002, with the 2006 Brisbane meeting followed by a meeting in Cologne in 2010). The Commission meetings achieve many purposes. The most obvious is the value of face to face meetings between the international and national communities with interests in the teaching and learning of geography. The most important, though, is the exchange of research findings relating to pedagogy and policy in geographical education. Formal papers allow review and debate in a format devised to be critical, constructive and well informed by contemporary practice. Many papers presented in Commission meetings become part of the research product of the Commission through publication in the journal *International Research in Geographical and Environmental Education* (IRGEE). These papers are the day-to-day record, but *International Geographical Education Past, Present and Future* is the vehicle for a collective review and prospect exercise. It should encourage us to frame our corporate research efforts to address contemporary issues.

The Editors have laid out an agenda in their selection of themes for school geography in the future. The technological advances of the last decade need no reprise here, but the impact of technology on the teaching and learning of geography must be a research focus of geographical education if we are to prepare learners to be active, informed and effective citizens. <http://earth.google.com> is a signal site, but in many places we look we find internet-based communities of learners, computer cartographies and Geographic Information Systems. At this point we don't have universal provision of broadband internet, but the Editors have highlighted the importance of researching the impacts and opportunities of technologies for classroom geography.

Issues of sustainability have also been a significant item on research agendas for more than a century, and classroom geographers have contributed to cross-curricula sustainability awareness through our traditional interests in people-environment relations. More recently, our research project on teaching sustainability in schools (see the IGU Newsletter at <http://www.igu-net.org/>) has marked our commitment to this research theme in school geography. The Editors have underlined the importance of environment to geography teaching in their selection of this research theme.

The concepts of citizenship underpin many of the principles laid out in the Commission's 1992 **Charter on Geographical Education** (see <http://igu-cge.tamu.edu/>) and the 2000 **International Declaration on Geographical Education for Cultural Diversity**. While geography may not lead in teaching citizenship in the same way it does with sustainability, understanding peoples and places through time contributes to cultural awareness and social activity. Citizenship education has become increasingly important in the classroom since the new age of international uncertainty unveiled in 2001. Understanding geographies underpins classroom teaching of citizenship.

For most people, experience in the classroom has been the point in time and the place that determines their understanding of the discipline of geography. The role of school geography teachers has been central to this experience. Learning to draw and

use maps, to understand the geographies of people in places, and our relationships with social and physical environments gives students of geography, in a place called 'school', a vital collection of skills and information. Research into our effectiveness as teachers and how learning processes established in school translate into lifelong learning skills is the final chapter commissioned by the Editors of *International Geographical Education Past, Present and Future*. Their intent is clear; we must ensure classroom geographers, both teachers and learners, develop the best learning practice and that this practice builds effective lifelong learning.

The Commission on Geographical Education was pleased to support the proposal to put together this benchmark statement, and we are delighted with the outcome. It is now over to the collective of colleagues with interests in geographical education to make the most of this volume in their own work, and the learning of those for whom they have responsibility.

Lex Chalmers
Chair, IGU Commission on Geographical Education
January, 2006.

JOHN LIDSTONE & MICHAEL WILLIAMS

RESEARCHING CHANGE AND CHANGING RESEARCH IN GEOGRAPHICAL EDUCATION

A popular aphorism has it that the only constant in life is change and this is certainly true both spatially and temporally in geography and geographical education. However, it is also demonstrably true of research itself, whether applied to geographical education or any other aspect of life. Imre Lakatos (Lakatos, Feyerabend & Motterlini, 2000) thought of research in terms of programmes of investigation, and believed that such programmes could be compared according to their relative progression or degeneration, their coherence in mapping out future research, and their discovery of novel phenomena. However, it is often only in retrospect that we can judge the extent to which research in any area constitutes coherent programs of investigation, and one way in which this has been attempted has been to classify and evaluate published research studies. Since the mid-twentieth century, there have been a number of formal classifications of research in geographical education, the most recent being that by Foskett and Marsden (1998). As well as drawing together evidence of “programmes” emerging at the international level, these reviews are useful in consolidating the findings-to-date of research in specific aspects of geographical education while, from an historical perspective also reveal those aspects of the subject important to practitioners and researchers at particular periods, and show how the foci of research may change over time.

INTERNATIONAL RESEARCH IN GEOGRAPHICAL AND ENVIRONMENTAL EDUCATION A CASE STUDY

For the purposes of this volume, associated as it is with the Commission on Geographical Education of the International Geographical Union, we base our comments on the papers published in another Commission associated publication *International Research in Geographical and Environmental Education* (IRGEE) over its first decade from its foundation in 1991. It is acknowledged that to draw conclusions about an entire academic field of study from an examination of a single journal is to make a number of assumptions that may be hard to justify. *IRGEE* may not be typical of all journals in either geographical education or environmental education. The very title of the journal reflects a perception on the part of its founding editors that environmental education is an essential part of geographical education, although further investigation has revealed that this is far from a valid assumption for all countries. In North America,

for example, environmental education appears to be at least as much the domain of science educators as geographical educators. Furthermore, it is at least possible that the papers sent to *IRGEE* do not represent many of the wide ranging and vibrant research agendas that may be exposed more evidently in national journals. Perhaps the whole notion of an international community of scholars with common aims for their field is unsustainable in the face of local agendas and priorities. While those of us who work in smaller countries or academic communities are forced to look to the international community for our inspiration and exposure, those from large countries may feel that they are better served by sending their best work to local rather than overseas journals. Perhaps the commercial reality of an English language publishing policy has a greater effect on submissions than we realise. Perhaps the journal has Editors and an Editorial Board who are blinder to their own histories and biases than they appreciate. On the other hand, perhaps the normalising effect of globalisation impinges on our expectations more than we realise. These caveats will be discussed in greater detail later in the chapter.

The Geography of Research in Geographical and Environmental Education

Initially, let us look at the pattern of publications, both in terms of national origin and substantive focus over the first ten years of the journal's life. While the number of issues published each year has varied, the format of each issue has remained constant throughout this period an *Editorial* on some topical issue, three to five *Major Research Papers*, followed by a *Forum* section in which a guest editor is invited to propose a topic particularly pertinent to an area of geographical and/or environmental education and to invite a group of other people to assist in exploring its ramifications regionally, systemically or conceptually. Finally, each issue has carried *Reviews* of publications believed to have some relevance to an audience of geographical and environmental educators. The analysis that follows relates solely to the papers published as either major research papers or Forum contributions. Major research papers are substantial papers that have gone through a rigorous process of "blind" peer review by (usually) three reviewers from different continents, including, whenever possible, a notable academic from the country of origin, and preferably from the culture of origin, of the author(s).

As Table 1 shows, the 28 issues of *IRGEE* published to date contain a total of 274 papers of which 107 have been Major papers. Of the forty-three countries from which authors originate, 167 have been contributions to the Forum section of the journal. From the inception of *IRGEE*, the intention of these Forum sections has been to encourage an international dialogue on aspects of our discipline (such as children's understanding of maps or the place of values education in geography), to inform colleagues around the world of developments in particular regions (such as the Baltic States), countries (such as Russia), or institutions (such as the Grosvenor Centre for Geographical Education in the USA) and either to place such developments within a research framework or to promote and encourage further research. Forum

Table 1. *IRGEE*, 1.1-11.1 Some Basic Publishing Statistics.

Number of issues published	28
Total number of papers published	274
Total number of countries from which authors of <i>IRGEE</i> papers have come	43
Number of main papers	107
Authors associated with these papers	156
Individual people who have written main papers	129
Countries of origin of major paper writers	24
Number of Forum sections published	25
No of Forum papers	167
Authors associated with Forum papers	188
Individual people who have contributed to Forum papers	159
Countries of origin of Forum paper writers	33

sections are usually created by commissioning editors who use their own networks to encourage colleagues in countries and from cultures where publication in other than in the vernacular is difficult, raising issues that may not otherwise have been aired and promoting new areas of research and scholarship to the mutual benefit of the international scholarly community.

While the statistics presented in Table 1 appear straightforward, analysing them in a meaningful way is far from simple. A number of authors have their names on more than one paper, while many papers have more than one author. Some papers have been written by authors from different countries. The convention of placing authors' names in alphabetical order makes it difficult to identify a leading author (if indeed one exists) and neither may it be assumed that the corresponding author is necessarily the senior partner in the research enterprise. The analysis and conclusions that follow must therefore be regarded as very tentative.

Table 2 shows the countries of origin and number of author-papers published as major papers and *Forum* papers. While it shows that *IRGEE* has presented the work of academics from 43 different countries, a more detailed analysis of the spread of contributions to both major papers and *Forum* sections reveals that only three countries produce the majority of papers. Of authors of the major papers, 57.7 per cent come from the United Kingdom (and principally from England) (46), the United State of America (18) and Australia (26), while of authors of Forum papers, 57.1% come from the same three countries (U.K., 51; U.S.A., 27 and Australia, 18).

Authors from only 13 of the 43 countries have contributed to both main papers and *Forum* sections, and Spearman's R between the two lists of 0.89 suggests that both aspects of the journal, including the *Forum* that is intended to encourage a wider international focus, are dominated by a very small number of countries. Perhaps it is not surprising that the dominant countries are from the English speaking world, but given the primacy of English as the language of international communication, the geographical education community does itself no favours if it fails to ensure wider

Table 2. Number of Authors and Countries of Papers Published in IRGEE, 1.1–11.1.

	Country	Authors of Major papers	Authors of Forum papers
1.	Argentina		1
2.	Australia	26	18
3.	Austria		1
4.	Belgium	1	1
5.	Botswana		1
6.	Brunei	1	
7.	Canada	8	6
8.	Denmark		3
9.	Estonia		3
10.	Fiji	2	
11.	Finland	3	2
12.	France		2
13.	Germany	3	7
14.	Greece	1	
15.	Hong Kong	13	5
16.	Hungary	2	
17.	Iran	1	
18.	Ireland	1	
19.	Israel	4	1
20.	Italy		1
21.	Korea		
22.	Latvia		1
23.	Lithuania		1
24.	Malaysia	1	
25.	Mexico		1
26.	Nepal	1	
27.	Netherlands	10	3
28.	New Zealand	1	1
29.	Nigeria		2
30.	Norway		1
31.	P.R. China		8
32.	Portugal	1	1
33.	Russia		3
34.	Singapore	8	5
35.	Slovenia		1
36.	South Africa		3
37.	Spain		4
38.	Switzerland	1	1
39.	Turkey	2	
40.	UK	46	51
41.	Ukraine		1
42.	USA	18	27
43.	Vietnam	1	
	Total author/papers	156	168

dissemination of experience and research findings. On the positive side, 18 countries have been represented in *Forum* sections, enabling those of us from the Anglo-world to gain at least some understanding of developments in those countries. We may also hope that academics in those countries may henceforth feel encouraged to submit their research work to the scrutiny of the international geographical education community through major papers.

Classifying Research Published in IRGEE

The 107 *major papers* were classified, first, according to whether their focus is geographical education, environmental education, or primarily environmental education within a geographical education context, revealing a ratio of 70325. They were then classified according to the scheme used by Foskett and Marsden (1998). Table 3 shows the categories from that classification in which *IRGEE* papers appear, and the number of papers occurring in each category. Bold figures indicate the total number of papers in each of the five main sections of the classification, and it should be noted that the original final category *Geographical and Environmental Education in other countries*, has been redefined for the purposes of this study as *Comparative Geographical and Environmental Education*.

The story revealed by this classification is as interesting for what is missing as for what it shows. While papers in group A **Geography and Education** include some on both research and the changing nature of the discipline, few research studies have been published in *IRGEE* that have explored justifications for keeping geography in the curriculum. This is surprising given the prominence of the topic in conversations at conferences and in Editorial comments in a number of national and international geographical education journals.

The large number of papers in group B **Geography in the Curriculum** may be interpreted in two ways. The emphases on graphicacy, children's learning and language may be welcomed as showing that traditional concerns of geographers are not being ignored, but they could also reflect a research agenda that has barely moved on in a quarter of a century. Of great concern is the lack of research on modern technologies such as Global Information Systems. While Foskett and Marsden's classification includes Information Technology, no papers published in *IRGEE* fall into these categories. Finally, while some papers have been published on evaluation/assessment, an issue now looming ever larger across the world, is notable for its absence. The importance of group C **Geographical Education in a Social Context** has long been recognised. However, despite the continuing claims by its practitioners that geography can help to ease global tensions, the lack of research to justify such claims for the area is surprising. The largest number of studies in this category relate to "becoming a geography teacher". We may also ponder the disparity of numbers between research in this area and that in group D **Environmental Education**. Finally, we may consider research classified here in group E as **Comparative Geographical and**

Table 3. *The focus of major papers published in IRGEE, 1.1–11.1.*

Foskett and Marsden Classes/Categories	Number of papers
A. GEOGRAPHY AND EDUCATION	(19)
2) Research in Geographical Education	8
4) The Changing Nature of Geographical Education Historical and Future	9
5) Justification of Geography in the Curriculum	1
6) Geography in the National Curriculum of England and Wales	
B. GEOGRAPHY IN THE CURRICULUM	(42)
1) Learning and Teaching in Geography	
(a) Graphicacy	8
(b) Children's Learning	10
(c) Language	6
(d) Teaching Styles	2
(e) Differentiation and Progression	2
(g) Developing Values and Attitudes	2
2) Curriculum Planning in Primary Geography	1
3) Curriculum Planning in Secondary Geography	3
5) Curriculum Planning in Higher Education	2
7) Field-work and Outdoor Education	(1)
(c) Secondary and Tertiary Level	1
9) Teaching Resources	
(a) Textbooks	1
10) Assessment and Evaluation in Geography	10
C. GEOGRAPHY EDUCATION IN SOCIAL CONTEXT	(12)
2) Geography and Equal Opportunities	
(a) Social Justice and Welfare Issues	1
(b) Multi-cultural Issues	1
3) Geography and Economic Awareness	1
D. GEOGRAPHY AND ENVIRONMENTAL EDUCATION	(18)
1) Environmental Education	17
2) Environmental Geography	1
E. COMPARATIVE GEOGRAPHY AND ENVIRONMENTAL EDUCATION	(15)

Environmental Education which may re-emphasise the importance of geographical educators sharing experiences to the mutual benefit of all.

Do we conclude from this analysis and initial interpretation that research in geographical education, as represented in the pages of *IRGEE*, is healthy and making progress or quietly stagnating? It is our contention that seeking answers to this question is essential if we are to be able to evaluate the rate and direction of change in geographical education research and thereby assess the health of the discipline or field of study of geographical education. The following section presents our reflections on research in geographical education over a number of years.

REFLECTIONS ON THE RESEARCH STORY

Researchers studying school geography have five principal sources of information previous research studies; valid and reliable empirical data collected through systematic and rigorous research; anecdotal accounts of policy makers, students and teachers; official statements of governmental and quasi-governmental agencies; and curriculum publications such as textbooks, atlases and Internet websites. The richness of these sources varies from nation to nation. Where geography has been firmly established in school curricula for many decades and where there are many universities with active geographical educationists, researchers are likely to have access to many relevant publications. Where geography has low status and has been marginalised in the school curriculum, there is a likely to be a much poorer publications base and weaker research tradition.

Of course, all of the sources are, to some extent, subjective. Researchers may in some states be at liberty to choose their research topics and have relatively free access to the persons, institutions and activities they wish to study. Even where there is a high level of free choice, research will be strongly influenced by the research conventions pertaining in their local circumstances. It will also be strongly influenced by access to the media for publication everywhere there are editorial gatekeepers who are powerful in determining what is published in books or research journals. Where research is funded, funding bodies will set limits on the research that can be undertaken and may influence directly the findings that enter the public domain and the form of any presentation. Such influence manifests itself in copyright control and censorship of findings. These limitations apply in both government funded and non-government funded research projects.

Even without the control exercised by funding agencies, researchers are controlled by their own ideological and institutional preferences. It is important to know the ideological and institutional stances of much-published influential researchers. Thus, in some countries any substantial research is initiated and undertaken in government funded national research institutes. Clearly, the agendas for these institutes are circumscribed by government influence. They are some considerable distance away from the small-scale research studies undertaken by isolated academics without funding support. However, even these isolated individuals must make choices as to how best

and where best to direct their studies. They may have specific interests in a very narrow range of questions and in selecting their questions many forces are brought to bear. They will have personal preferences dependent on their ideological leanings and these are usually evident in published studies. The following brief, and provocative, caricatures, not presented in any particular order, offer some guidance for identifying the motivations and enthusiasms of researchers in geographical education.

Researchers Caricatures

First, there are the *substantive fundamentalists*. These have a strong disposition to advocate the continuation of what they perceive to be the traditional subject strengths of school geography. They seek to identify, from historical sources, those aspects of the subject matter that they believe should be sustained and reinforced. They seek to support their advocacy using epistemological arguments, at the heart of which are the distinctive contributions of geography to the education of children and young people. They look for subject purity and argue for the definition of this purity almost as a human right arguing that children of all ages, everywhere, have the right to receive geographical education.

Secondly, there are the *curriculum pragmatists*. They are less concerned with subject purity and much more concerned with the survival of the subject in some form in school curricula. If need be, they will advocate the inclusion of geography in integrated and inter-disciplinary programmes and courses. They will also be alert to opportunities for enhancing geography's image and status by responding to official initiatives that may, at first sight, appear to be peripheral or irrelevant to the subject. Thus, a government pronouncement to re-energise, say, the teaching of literacy or numeracy could lead to advocacy of geography as a suitable vehicle for contributing to the achievement of this goal. Where the place of geography in a curriculum appears to be threatened by innovations such as citizenship education, moral education or education for sustainability, the pragmatists will respond by seeking to demonstrate the critical role of geographical education in these innovations. Geography, for the curriculum pragmatists, has very loose boundaries and has the capacity to accommodate all manner of changes without, apparently, losing its distinctive qualities.

Thirdly, there are the *psycho-pedagogues* who see school geography less from a substantive perspective and more from a logistical perspective. They are particularly interested in how children learn and what methodologies can be used most effectively to promote learning. Their interest will include such pedagogical approaches as fieldwork, mapwork, participatory action research, enquiry and the use of the new information technologies. To some extent, for the psycho-pedagogues the subject matter of geography is subservient to teaching and learning strategies *how* the learner acquires geographical knowledge, understanding, attitudes and skills is more important than *what* one learns and *why* one needs to learn it.

Fourthly, there are the *radical reformers*. They are driven by the need to root out what they perceive to be social and economic disadvantages. They are impatient

for profound changes in the social order and see geographical education as having a contribution to make to these changes. Their concerns may be couched in overt political language, with support for specific political parties sometimes made plain. They see both pedagogy and subject matter as intertwined in the drive for curriculum change which they see leading in the long term to societal change. Geographical education becomes synonymous with welfare education, citizenship education and moral education.

Finally, there are the *visionaries*, crystal-ball gazers with eyes on the future. They seek to extrapolate from current trends the likely shape of geographical education in the future. They are obliged to speculate on the future in a holistic way, seeking to predict how the various facets of school geography are likely to change alongside changes in society at large, local communities, schools as organisations, curricula, pedagogy, human and material resources, teachers and students. Visionaries may take the immediate future, the medium term or the long term as their time span. They are divided between Socratic optimists who envision continuous progress and improvement and Aristotelian pessimists who predict gloom and doom.

Needless to say, these caricatures stretch reality geographical education researchers generally have some of the features from one caricature mixed with features from some of the others. However, more importantly, we need to acknowledge that persons from diverse cultures will attribute meanings and emphases to each caricature according to the conventions pertaining in their cultures

Researchers and their Cultures

Across the world research in school geography has been conducted for various purposes, using various methods, and the findings have been published in a variety of forms, including books, journal articles conference proceedings and website reports. There is a danger for researchers from English language communities world-wide in assuming that researchers working in English language contexts have conducted all the best work. In reading through research reports in the English language, the absence of references to non-English sources is remarkable. It would appear that most researchers working in an English language context are quite unfamiliar with work published in, say, Chinese, French, Spanish or Japanese. Both of us are from this English language context. A strong motivation for producing this book is to counter this cultural isolation. Throughout the editing process we have been conscious that several of the chapters were originally prepared in a language other than English and then translated. We have no way of knowing what of significance has been lost in the translation process.

We also need to take into account “language as text” implications. Geographical educators communicate using a variety of discourses and sometimes these can get jumbled. Thus geographical education researchers may not simply come from particular backgrounds in terms of the subject – cultural geography, geomorphology, economic geography, climatology and so on – but they also are drawn from different

research traditions, both in geography and in geographical education. Further, when researching some topics, they may have a strong commitment to particular interest groups, as in the environmental field where there are many non-governmental organisations and partisan pressure groups. Such commitments are rarely declared and yet they may have substantial influences upon the researcher's work. In reading the literature of geographical education we need to recognise the slippage of the writer from geographer through environmental scientist, environmentalist, environmental activist to eco-warrior. Similar slippage from intellectualism to partisanship to action can be encountered in the contexts of race, gender, ethnic grouping and disability. In reading research reports, there is often consideration given to the social class, gender, ethnicity, intelligence, ability and age of the persons researched. Much less attention is paid to these characteristics as they apply to the researchers. Indeed there would sometimes appear to be a taken-for-grantedness that these characteristics are relatively unimportant. Researchers may be unaware of their own prejudices and preferences.

Because of the English language dominance in much of the popular geographical education literature and in the work of international agencies active in the field, there is a danger in assuming that all of the immediate concerns for geography expressed in Britain, the USA and Australia are shared by geographical educationists in countries as diverse as Algeria, Brazil, China, Indonesia and Japan. There is a pressing need for the concerns of the latter to be disseminated widely not simply to ameliorate the English language hegemony but also to assist in the search for alternative solutions to problems of geographical education and to enhance research in the field.

Another important aspect of the cultural context of geographical education researcher is the educational research discipline he or she favours. There are geographical education researchers who are well-qualified in one or more of these disciplines, for example in the history of education, educational psychology or the sociology of education. It would appear obvious that the quality of research, in terms of scholarship and research methodologies, benefits enormously from these disciplines. Much, then, depends on how geographical educationists in universities, research institutes and government institutions are recruited. Recruitment on the basis of school teaching experience rather than advanced academic research training in the educational disciplines hinders authoritative research in geographical education. What this challenges is the definition of the geographical educationist, and definitions vary from nation to nation. It also poses questions about the audiences to whom the researcher in geographical education should best address his or her research findings. Elsewhere it has been argued (Williams, 1998) that researchers in geographical education should consider the impact of their research on the educational research community at large. They have the opportunity to contribute to refining well-established research methods and also conducting studies that enhance the understanding of pedagogy as well as other fields of research endeavour. Of course, such an argument is unlikely to convince those researchers who see their work grounded solidly in school geography classrooms and who wish to offer support and encouragement to classroom teachers.

At the heart of this is the spectrum of geographical education that stretches from professionally driven practice (for example, the concerns of particular teachers

in particular classrooms) through to intellectually driven theory. In the middle are such groups as policy makers, curriculum planners and evaluators, publishers of educational resources and student examinations agencies. Each of these groups has its own geographical education culture and has its own expectations of what it may gain from the research community. Certainly, it has proven extremely difficult to assess the direct impact of research in geographical education at any point across the spectrum (Williams, 2003).

Researchers and their Sources

Earlier in this chapter we referred to the five principal sources of information used by researchers of school geography. It is customary for research reports to begin with a review of relevant literature and most of such reviews are derived from academic studies. Reputable research relies on scholarly evaluation of previous studies. Re-inventing the wheel should be avoided and this is true of substantive issues as well as methodological matters.

When investigating the traditions, contemporary features and the probable and possible future of geographical education, researchers are heavily dependent on policy studies at national and sub-national levels and such policy studies may go beyond strategies and plans to include the logistics of dissemination and implementation. They must also take into account the broad contexts in which policies are devised and the role of powerful agencies and personalities serving as gatekeepers to promote or hinder progress. For the scholars who have contributed chapters to this book one of the challenges has been to establish a balance between policy documents and commentaries and research studies that focus on the policies. They also needed to strike a balance between those commentaries that are heavily biased towards the opinions of the commentators and those that are comprised of judgements of the evidence, with the bases for the judgements clearly articulated.

In some countries policy documents are written as broad guidelines, offering teachers targets to aim for and suggestions regarding the content of syllabuses. Sometimes more attention is paid to the allocation of teaching time for geography and the provision of resources than to the subject content. In other countries close attention is paid in policy documents to the subject matter and how it must be taught. The subject matter is further defined by state-approved, and sometimes state-published, textbooks and supporting materials. Further detail is provided in public examinations and in the state-controlled syllabuses of courses of pre-service and in-service teacher training. Some countries have formal inspection or school accountability systems to ensure that government curriculum policies are implemented at the local level. As the chapters in this book clearly indicate, there are wide variations from country to country in policy details with regard to aims, content, teaching methods and assessment arrangements. There are also variations in the arrangements for student testing and examinations, in the use of school-based self-evaluation, in the employment of inspectors and in the sanctions applied to teachers and schools that fail to meet state defined requirements.

Given the power and authority of school textbooks and atlases in many (perhaps most?) countries, it is not surprising to find that they have attracted the attention of researchers (for example, Lidstone, 1985; Graves, 2000; Graves & Murphy, 2000; Marsden, 2001). In some countries the textbooks and atlases to be used in schools are commissioned, published or selected by government agencies. In others, there is a free market and teachers may choose their own resources, sometimes dispensing with textbooks and producing their own manuals and worksheets. The role of the Internet is constantly changing as more and more schools are able to access it and more and more students have access at home to computers.

Beyond policy documents and curriculum materials researchers have access to all kinds of data gathered through empirical studies. In such studies, much hinges on the selection of the providers of such data. Here we are thinking of research populations and the quality of the sampling procedures. There have been many pioneering studies in geographical education that have utilised small samples of convenience to generate data. Such studies, if not followed up by much larger studies based on data from large random samples, have limited value. They generally have more to say about problems of applying research instruments than about the provision of significant findings.

Researching Change

Even a cursory opening of journals that report research in geographical education reveals the eclectic nature of the research topics and research methods in the field. Some researchers have a strong preference for a particular research paradigm technical and positivist; interpretivist; or critical, emancipatory (see Williams, 1996), and within the preferred paradigm a preference for particular research methods. Indeed these ideological and methodological preferences may be the starting point for a research study. It becomes a matter of means and ends. The means are the topics but the ends are the improvements in research methodology. This is a contrast to a researcher identifying a research problem, using various criteria in determining the importance of the problem, and then selecting a method judged to be most appropriate to resolve the problem. What is explicit in both of these approaches is the assumption that the researcher is free to make the choices.

Some researchers feel constrained by the need to engage in research that puts aside the concern to improve research methodologies or to resolve problems judged to be important by the researcher and to engage in research that fits the agendas of non-researchers. Commonly, it is asserted that geographical education research should serve the needs of policy makers or practitioners. What is noticeable in many governmental policy documents relating to geographical education is the absence of any reference to research findings used directly to guide policy. Further, there is often reluctance on the part of policy makers to commission or sponsor research at either the inception of a policy or in the implementation of a policy. The same disinterest is evident among practitioners, such as schoolteachers. It is difficult to find evidence of research that impacts directly on classroom practice (Williams, 2003) and there

appears to be no great enthusiasm among schoolteachers to subscribe to and read journals and books concerned with research in geographical education.

Catering to the myriad perceived needs of schoolteachers and policy makers is a difficult road for researchers to tread. In some countries policies change with changes of governments and, as a result, policy changes can be unpredictable. The consequence is that some ongoing research may no longer be relevant and researchers are left stranded with projects that once looked promising but overnight are rendered useless – in policy terms. Similarly, teachers in schools often have difficulty in determining the life span of educational reforms and projects. What is apparently a high official priority in one year can quickly be ignored a year later. Research that follows the immediate interests of geography teachers is likely to be of transient value. The essential need for geographical education researchers is to devote much effort to prioritising the fundamentals of geographical education and then deciding on the best research methodologies to address the top priority questions and issues. These fundamentals bridge cultures and the findings of related research should be of interest in broad international and intercultural contexts. Of course, research is often a slow, lengthy process and researchers can be tempted into taking short-cuts to meet institutional accountability requirements. Countries that have adopted formal university research assessment exercises have been criticised for promoting “quick-fix” research that sacrifices quality for quantifiable outputs. To generate such output researchers are likely to utilise research methods that can yield quick returns. Hence the use of instruments that can be administered simply to small samples, often samples of convenience. These samples are often insufficient for the employment of sophisticated statistical procedures. Where qualitative data have been gathered, these, too, are rarely subjected to scientific analysis. Repetition of studies in different cultural or national settings is an unusual feature of geographical education research. What this suggests is that much research in geographical education is in the incipient stage (Table 4).

RETURNING TO A FUTURES PERSPECTIVE

Change is not context-free. This self-evident assertion can be illustrated by the history of former colonial states. These states have a recent history with three clear stages pre-colonial, colonial and post-colonial. Some of the stages are particularly sharp, the product of wars of independence and internal strife. The drive to independence, especially since the 1950s, is clear evidence of this and more recently we can point to the velvet revolution in Eastern Europe with the collapse of the Soviet Union. Just as striking are the return of Hong Kong and Macao to China, the break-up of Yugoslavia and the wars in the Middle East. Further, there are the shocks to political systems resulting from physical and human disasters. Clearly, at the time of writing, the impact of the 2004 tsunami on the communities surrounding the Indian Ocean, the earthquake in Pakistan and Kashmir, and the Louisiana floods, are fresh in our minds. But we can also reflect on the geographical education consequences of, violent

Table 4. Stages of growth in the culture of research in geographical education (Williams, 1998).

Incipient stage	Intermediate stage	Mature stage
Individuals researching in isolation	Intra-institutional groups	International groups
Idiosyncratic and changing substantive focuses	Stable substantive focuses though subject to personnel changes	Enduring substantive focuses that are unaffected by personnel changes
Unfunded	Funded by local and national organisations	Funded by international organisations
Unsupported by a professional body	Supported on the margins of a national professional body	Central to the work of an international body
Dominated by immediate practical issues	Linking practical and theoretical issues	Dominated by universal theoretical issues
Focused largely on a single sector of a national education system	Focused on more than one sector of a national education system	Focused on lifelong learning in an international context
Undeveloped specialist geographical education research language	Emergence of a specialist geographical education research language	Use of a sophisticated geographical education research language
Absence of textbooks on geographical education research	Introductory textbooks on geographical education research	An array of established textbooks on geographical education research
Lacking close ties with conventional educational disciplines	Developing ties with a number of educational research disciplines	Closely integrated into the educational research community
Lacking any sub-discipline strengths within geographical education	Emergent sub-discipline strengths within geographical education	Established sub-discipline communities within research in geographical education
No infrastructure of research focused symposia, conferences, web pages, journals, and other publications	Developing nationally based infrastructure of research focused symposia, conferences, web pages, journals and other publications	Well developed international infrastructure comprising symposia, conferences, web pages, journals and other publications
Few opportunities for training in research in geographical education	Limited national opportunities for training in research in geographical education	Many international opportunities for training in research in geographical education

volcanic eruptions, landslides, and severe droughts. There is an interesting history of geographical education to be written that takes fully into account the consequences of revolutions, wars, natural disasters and political crises, including the links between explanations for events, including the now infamous 9/11 events in the United States as well as similar incidents in Madrid, London, Jordan and elsewhere, that may be gleaned in the intersections of geography and other disciplines such as economics, sociology, history and political science.

Joseph Conrad (1924) offered an interesting reflective account of changes in geography as perceived through the eyes of a mariner and novelist. Writing about geography, he commented (p. 239)

Like other sciences, it has fought its way to truth through a long series of errors. It has suffered from the love of the marvellous, from our credulity, from rash and unwarrantable assumptions, from the play of unbridled fancy.

He traced the evolution of geography from a fabulous phase, lasting up to the discovery of the New World, through a militant phase and then romantic phase. However, there was little romantic about his experience of school geography. Notice this devastating commentary on his classroom experience

Unfortunately, the marks awarded for that subject were almost as few as the hours apportioned to it in the school curriculum by persons of no romantic sense for the real, ignorant of the great possibilities of active life; with no desire for struggle, no notion of the wide spaces of the world - mere bored professors, in fact, who were not only middle-aged, but looked to me as if they had never been young. And their geography was very much like themselves, a bloodless thing, with a dry skin covering a repulsive armature of uninteresting bones (p. 253)

Mention is made above of natural disasters and terrorist attacks as potential pabulum for both geographical education and research in geographical education, and to these could readily be added pushes internationally for the legalisation of same gender marriage, economic effects of various levels and forms of globalisation and control of the internet. All these current concerns are important aspects of the world in which the young people currently studying geography are living and studying.

Lidstone (2004) suggested that we may think, with Florida (2003), of distinct societies developing across the world with different institutions, economies, incomes, ethnic and racial makeups, social organisations, religious orientations and politics. Rather than basing these societies on national or regional boundaries, or religious affiliations, they may be conceived as being based on developing and static world views. One is creative and diverse – a cosmopolitan mixture of high tech people, bohemians, scientists and engineers, the media and the professions. The other, a more close-knit, religion-based, older civic society of working people and rural dwellers. Florida asserts that the former is ascendant and increasingly dominates the economic futures of many countries since they are richer, faster growing and technologically savvy. In terms of Florida's "3Ts", with their high levels of talent, technology and tolerance, these new societies attract, especially young, people – both physically in terms of relocating both legally and less legally, but also in terms of wanting to change their lifestyles. Intuitively, adopting such notions of such trans-national social cultures

has potential for engaging students in the geography of their world. Certainly, it may lead to accusations of subversion of established orders, but perhaps that is preferable to the image of our subject as “a bloodless thing, with a dry skin covering a repulsive armature of uninteresting bones” as presented by Conrad!

There will undoubtedly be some teachers, in those parts of the world in which they have sufficient freedom over their curricula, who are teaching in precisely the ways in which Lidstone envisaged. However, current research literature appears to be providing few answers to such questions as how is such teaching taking place? to what extent does it permeate teaching in particular cultures? what factors facilitate such changes in curriculum? what are the reactions of students to studying contemporary world events from a geographical perspective? and what kinds of learning result from such changes? Perhaps in researching change in geographical education, we also need to change the ways in which we research geographical education.

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SECTION A:

TRADITIONS IN SCHOOL GEOGRAPHY

BILL MARSDEN

INTRODUCTION: MESSAGES FROM THE PAST

The culture of geographical education, as the editors of this volume point out in Chapter 1, draws on qualified researchers in diverse educational sub-disciplines, and not least history and the social sciences. Contributors to Section A offer a selection of messages from the past history of geographical education. Stoltman's essay makes clear the value of an historical perspective. As he illustrates, being able to place ideas in different contexts, including the temporal, is important. Current issues are often paralleled, though not exactly, by those of the past, which provides a body of knowledge and experience that can contribute to a more critical awareness of the present, and counter presumptions that great ideas have recently sprung into being.

Historical methodology is also a significant part of this research culture. Briefly, primacy is given to the meticulous and comprehensive collection and verification of evidence, as part of an inductive approach to generalisation. The historian is in a sense a conservationist, concerned for idiomatic and empathetic use of resources from the past, as often as possible based on primary source materials. Many geographical educationists, however, have seemed more comfortable applying the sub-disciplines of the social sciences than history in their research endeavours. Unless well applied, however, there are in my view significant problems associated with the application of social scientific approaches. One suspect practice, for example, is the manipulation of facts to fit social theories. By going back in history, evidence can almost always be picked out to support a particular theory. Conveniently, counter evidence may be ignored. Similarly there is the tendency to slot ideas, events and persons into theoretical categories, in the quest for methodological rigour. The problem is well illustrated in Chapter 1, where Lidstone and Williams attempt to classify researchers in geographical education in this way. Wisely, however, they accept that they are in essence offering caricatures. How many of us would feel comfortable being penned into one of these categories? As the editors imply, a more intriguing exercise would be to investigate the complex mixture of traits present in each of us, and how the balance of these changes in the course of our professional careers.

Back to the history, Stoltman in Chapter 2 usefully identifies "turning points" in geographical education. Some of these apply across nations, and some do not. Certainly the United States and the United Kingdom in the late 1960s and early 1970s experienced two of the most exciting turning points, in the concurrent revolutions in curriculum theory and in academic geography. These encouraged a number of geographical educationists to offer a synthesis of these and other developments in a flowering of the literature in the 1970s, whether in methodological texts, articles,

or in the production of text book and other teaching materials. An associated turning point of that period was the emergence of energetic pressure groups, demanding among other things that geographical educationists should display overt social and environmental consciences, and be politically active, rather than burying themselves in the academic purity of the discipline. They espoused a potpourri of cross-disciplinary initiatives, including environmental education, citizenship education, peace education, development and global education, and others, all striving to reclaim the soul of geography from the subject specialist. These were all worthy causes and some excellent educational materials resulted. But, as Lidstone and Williams point out by way of example, there came with the passionate commitment slippage from the environmental scientist, to the environmental activist to the eco-warrior, and from education to indoctrination in some cases.

The politicisation of the curriculum, deemed desirable by advocates of a more issues-based curriculum, provoked vicious polarisation during the 1980s between left and right wing educational apologists, and counter-accusations of propagandising. The conflict in the UK, and particularly in England, triggered increased government intervention in the curriculum (see Marsden, 2000). The polarisation also provoked a shift from relatively liberal notions of education to more circumscribed and ideologically focused instruction. On the right, this was exemplified in the UK government's moves into the citizenship curriculum (see Lambert & Machon, 2001; Williams & Humphrys, 2003). Central intrusion into the curriculum thus became another, and on the whole negative, turning point in geographical education in England, with the categorisation of core and non-core subjects inevitably leading to a lowering of status of subjects in the latter group. Another particularly unfortunate outcome has been the deepening of the gulfs between various sectors of education. There are few contacts today between academic researchers at the frontiers of knowledge, whose work has become increasingly specialised and esoteric, and those teaching geography in schools. How can there be, when the former are obsessed with the research assessment exercises, and similarly the linkage of inspection of schools with the consequent debilitating league tables, which can lead respectively to the closure of departments and of whole schools? In these circumstances, I wonder even more whether the statement by Williams, in the Introduction to Section 3, that the "accumulated wisdom" of researchers in geographical education "ought to be respected by policy makers at all levels, from government agencies to classroom teachers", leading presumably to reforms in practice, is a proposition that would readily be accepted by those bodies?

One more hopeful pointer to the future, though this has been claimed for some years now, must be the extraordinary potential of new technologies, particularly the concern of Kent in Chapter 3. As he suggests, as an example of the many possible benefits, "the web has the potential to transform geography education". At the same time he acknowledges that implementation of this and other elements of computer assisted learning is not straightforward. To one who has come belatedly to the field, if only at a personal level, the propensity for information overload is one aspect that appears daunting. Consider the following simple illustration.

“**Cape Finisterre** (Spanish *Cabo Finisterra*; Galician *Cabo Fisterra*) is a rock-bound peninsula in the uttermost west of northern Spain. It lies in the province of Galicia.

Cape Finisterre is the westernmost point of Spain, though not of Continental Europe (that honour belongs to *Cabo da Roca* in Portugal), and its name, like that of *Finistère* in France, derives from *Finisterrae* in Latin which literally means *Land's End*”.

Extracted from a nineteenth century capes and bays text-book? It fits that genre perfectly. But no. I found it on the web. It is one of 56,300 items that can broaden the student's knowledge on that particular Cape! Alarms bells ring. Might the compulsive attraction of youth to the internet, the excitements of quiz shows on television and in other media, latched on to government inspired shifts towards narrow modes of instruction and concentration on the basics, lead to a new turning point, with geography and comparable subjects demanding “an effort of memory” on the part of the pupil – a return to encyclopaedism?

There has been a marked and promising increase in contacts in geographical education in recent decades. Attending the 1976 International Geographical Union Congress in Leningrad and Moscow I was made strongly aware of friendly feelings but also of a profound ideological chasm between socialist and capitalist countries regarding the spirit and purpose of geographical education (or instruction). Nevertheless, even then, there had been a significant retreat from the nationalistic “schooling for war” that had disfigured subjects such as geography and history in the first half of the twentieth century (see Marsden, 2001). As Haubrich emphasises in Chapter 4, one positive aspect of the last fifteen years has been the melting down of the boundaries. There has been significant increase in knowledge of the similarities and differences between systems, more collegiality between geographical educationists from many nations, and a mutual desire to take on board the global issues of our time, not least stimulated by the success of the journal *International Research in Geographical and Environmental Education*. But as Haubrich states, on the evidence of his survey of relevant situations in 1995 and 2005, the rate of change is still not fast enough.

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JOSEPH P. STOLTMAN

TURNING POINTS IN GEOGRAPHIC EDUCATION

INTRODUCTION

Education is part of the larger cultural milieu in which the traditions, preferences, and expectations of a society or social group are either cloistered or open to external influences. Geography education is no exception. As a local study, geography initially was introduced to young people in an informal, utilitarian manner. It addressed such questions as when to plant crops, where to hunt, how to find one's way over distances, and other everyday necessities of life. Early geography was applied and functional. It often meant life-or-death consequences for the people involved. Geography is a spatial subject, and there is evidence that geographic learning pivots around specialised spatial thinking and skills (Kaas, 2005). The past centuries have been witness to the reordering of geographical education relative to political, social, and historical trends. However, it has remained an essential base of societal knowledge as it evolved both as a discipline and as an educational subject.

This chapter will journey with geographic education from its emergence to the present and relate what the author believes are significant junctures in its development. The four traditions of the subject were identified by Pattison (1964) as physical science, man land relationships, spatial science, and regional. Those traditions transcend the development of geographic education. However, geographic education has not evolved equally, nor at the same pace, in all regions of the world. Therefore, the focus and changes in the teaching of geography are treated as major turning points. Like a large ship turning at sea, when a turn is initiated, it takes considerable time to be completed. During the turning time, the wake of the ship overlaps itself. That is somewhat the story that unfolds in this chapter. While there are turning points in geography education, most are marked by mixing of the wakes of the discipline.

TURNING POINT DISCIPLINARY ANCESTRY AND TRADITIONS

Even before its name became well-known, geography education was prominent within civilisations. Geographic education was a part of the culture of education throughout the Greek and Roman periods. It was pursued during the early eras in North Africa and China, with notable accounts of geography from Ptolemy (Berggren & Jones, 2000), travel and history by Ibn Khaldun (Khaldun, 1958), and management of irrigation water in China (Swetz, 1992). Each of those accounts reflects on geography expeditions, research, and teaching. There is little doubt about the rich traditions of

geography as a discipline and the roles it played in the transfer of information about places and regions. Those ideas were important because they influenced the structure of geographic education in terms of what information was important, why it was important for people to learn, and what the consequences of that learning would be for both the learner and society. Thus, early geographic education remained deeply rooted in observation of Earth and its features, explaining the physical and human systems of Earth and making informed judgments about their importance. Geography education during the earliest periods examined the relationships between people and places. It was formal thought and scholarship, but the learning of geography was less formal compared to later structured curricula.

While scholars and universities made great strides in documenting and studying both stability and change in Earth's features, the interactions among resources, teachers, and materials began in earnest in the eighteenth and nineteenth centuries. While notable geography education occurred prior to that period, the great rise in the education of the masses became the entry point for geography on a grander scale. An important influence on geographic education was exploration of many parts of the world. Such exploration made contacts (with both positive and negative consequences) between different people and provided new information about other places. Reports of far-away places were provided, and maps, both regional and world, provided more accurate accounts of where places were located. It was up to geography education to provide new scholarly interpretations of information, inspire students to ask (or to memorise) why those places were located where they were, and to consider the human and physical characteristics of places.

TURNING POINT EXPLORATION AND GEOGRAPHIC EDUCATION

The period of geographic exploration of the near and more distant realms affected geographic education. Exploration and capes and bays geography were complementary in the late 1800s and early 1900s (Marsden, 2001). Capes and bays geography was a widely applied model of geography education associated with colonisation. Colonisation was important as a national political policy because industries needed resources and urban centers needed agricultural products. The result was the transfer of cultural values to colonised peoples. The transfer of cultural values was accomplished through elementary education practices; while few children were in school, those who were received a geography education based on the practices of the colonisers. Those practices were often in conflict with indigenous educational practices where the traditions of way finding, life skills in relationship to the natural environment, and reliance on the environment for the necessities of life were the practical benefits of knowing geography.

The capes and bays instructional model focused on content related to distant places, giving rise to the role of place in geographic education. The model also focused on the unique attributes of people living in those places. The uniqueness was revealed in customs, language, and indigenous economic systems. Those attributes were sometimes

subverted to become significant elements in building stereotypes of people and places (Lambert & Klineberg, 1967). Capes and bays geography was gradually subsumed into a new paradigm for curriculum, the expanding environment. The expanding environment developed as a curriculum sequence that engaged students at an early age in studying their family and community and at later ages the country, region, and world. The expanding environment and capes and bays geographies were sometimes combined as a curriculum called journey geography, in which students undertook vicarious explorations of the world at large. During a time of colonial expansion, migration, and exploration, perhaps the underlying intent was to prepare students who were fortunate enough to gain an education to develop a perception of ownership of distant lands. Through the expanding environment curriculum, the message of exploration is contained, perhaps as a residual of capes and bays geographies.

The rationale for an expanding geographic environments curriculum was that, as children progressed through school, they explored topics further removed from the local setting. Because this seemed a logical way for geography learning to occur, it created a level of comfort among geographers and educators. By the late nineteenth century, the expanding environment signature gained a foothold on curriculum sequencing in practice, if not in name. It remains a powerful, widely adopted approach in textbooks and curriculum structures around the world. It is only rarely that one encounters an early elementary geography class where the topic deviates from the local community and natural environment. While the mass media have presented the rest of the world through various types of programmes and coverage, the expanding environment remained an international curriculum model (Piaget & Weil, 1951). This pattern was validated as the general elementary curriculum pattern well into the 20th century (Haubrich, 1982). Even as the period of exploration on Earth lost its prominence, the wake of exploration continued within the expanding environment paradigm.

In secondary schools during this period, attention was given to the earth science aspects of geography, which was also a frequent focus in university geography courses at the time. Other topics, such as economic, commercial, agricultural, and regional geography courses, along with field study, began to appear in geography books for teachers and student textbooks, both being important gauges of the content of geographic education (Graves, 2001). University-level geography, which was becoming a more widely taught specialised subject within baccalaureate and graduate studies, influenced secondary school geography education. The increased secondary school enrolment among the general population and the scholarly pursuits modelled by institutions of higher education for teachers had a positive impact on geography in the secondary curriculum. More students were studying geography in both secondary and higher education as the long period of global exploration and colonisation entered the twentieth century.

TURNING POINT GLOBAL CONFLICTS AND GEOGRAPHIC EDUCATION

The period from 1915 to 1960 represents the early modern period for geography education. The period was marked by military conflict, the steady changes from colonial to home rule, the Cold War, and emerging ideas of nationalism. Two disciplines are impacted significantly by wars. The first is geography, since wars require great amounts of tactical and strategic information about the field of battle and the theatre of conflict along with pronounced geopolitical alignment information. The second is economics, since at war's end the economic costs must be paid. On the geographic side, both World Wars I and II resulted in greater knowledge about other places through geographic narratives in newspapers and books, through maps that relayed relative locations, through photography's new technique of aerial photogrammetry, and through the increased collection of information from field surveys and studies. War resulted in a great increase in knowledge about the world, its physical and human systems and characteristics. Global climatological and meteorological processes such as the jet stream were largely unheard of prior to this period, but became common topics of physical geographic studies during and after the period. Information about distant places complemented the expanding environment of the geography curriculum. Scientific writing and review of human-environment interactions were used to dispel environmental determinism, a popular explanation of global diversity in textbooks during the period. Global conflicts jump-started the early phases of the global information age, and geographic education entered a period of dispelling stereotypes of people and places.

During this period, another curriculum model was designed; this model, the social studies curriculum (Rugg, 1927), caused tension for geographic education. The social studies curriculum, first proposed in the United States during the period prior to World War I, claimed to incorporate a much broader sweep of social issues and concerns, including citizenship education, than did any one subject that dealt with society, such as geography education. The social studies followed the expanding environment paradigm, which was familiar to geography education and even duplicative in its sequence. Each of the social science disciplines (which left geography in a peculiar position since its scholarship is in both the social and physical sciences) was examined for appropriate topics and concepts, beginning with family and extending through studies of the world in the secondary school. Those topics and concepts were then embedded in the curriculum in age-appropriate sequences. The social studies curriculum was initially a curriculum phenomenon peculiar to the United States that was not readily accepted in other parts of the world. However, as time passed, the social studies movement gained momentum and influence. In some parts of the world, geography education has maintained its status while in others it has declined or has required enormous efforts to keep geography within the forefront of social studies (Mayo, 1964; National Council of Geography Teachers, 1956). While the early studies regarding the relationship between social studies and geography were from the United States, it may also be inferred from Haubrich's later research (1982) on geography education in thirty countries on five continents that curriculum tensions between

social studies and geography were the general condition, and not the exception. Often, what the proponents of social studies envisioned as gains in the education of students, geography educators envisioned as a loss to the curriculum.

While the curriculum debates were developing, the interwar and post-war period provided a great boost to regional studies in geography education. In what Norman Graves refers to as the “rise of regional geography” (2001) from the early part of the twentieth century, the two world wars acted as an accelerator for the study of regions. First, it was important for citizens of a country to know something about the regions of the world and their particular geopolitical interests and relationships. When might another “shatter belt” such as the Balkans erupt and engage distant countries in a long and costly military campaign? Secondly, the world wars increased the movement of products between regions. Places that had been major suppliers of strategic materials, such as the Malay Peninsula, were no longer able to supply world markets. New sources were developed for industrial minerals and other natural resources. At the end of the wars, those newly developed sources often continued in the supply line, and studies of global commerce with a strong regional structure were introduced to the curriculum. During this period, there was a curricular push and pull underway in geography education. This was in addition to the tension from the social studies integrated approach to teaching. The pull was to return to the capes and bays geography that was taught earlier, or to use the pull presented by world-wide interests in geography education to examine the issues and problems for which geography could provide alternative solutions and contribute to solving.

Geography education during this period acquired professional recognition as a curricular subject largely through its professional societies and organisations. Teachers were mainly responsible for starting national organisations for teaching geography with pedagogical and content periodicals and other publications. The Geographical Association (England and Wales) was one of the earlier organisations, beginning in 1893. It was followed by similar professional organisations for geography teachers in other countries. In the United States, the National Council for Geographic Education began in 1915. Numerous European countries had national geography teachers associations by the early 1900s. The first *Handbook of Suggestions on the Teaching of Geography* (UNESCO, 1951) recognised the importance of professional societies of geography teachers in enhancing the teaching of the subject in developing regions of the world. By the time the *UNESCO Source Book for Geography Teaching* was published in 1965, it listed societies for geography education in every region and in many countries (UNESCO, 1965). The newly founded organisations presented both the content and pedagogical elements of geography. The use of national organisations, such as the Australian Geography Teachers’ Association, to enhance visibility for the discipline in school and to develop professional networks among teachers was a critical activity during this period.

The literature of geography education during and following the world wars included articles and chapters in books about geography teaching in other countries. An example was *Geography in Education A Bibliography of British Sources 1870–1970* (Lukehurst & Graves, 1972). The references listed 140 articles and chapters under the

category Teaching Geography in Foreign Countries. The authors of the bibliography gave special attention to providing references that would inform geographic education scholars and curriculum planners about the genres of geography in the curriculum as well as the pedagogical elements that accompanied those genres. The genres were largely combined as regional and economic geography. The genres represented a new wake that was rapidly developing as geography education reached another turning point in its journey.

TURNING POINT RESPONDING TO A REVOLUTION IN GEOGRAPHY

The 1960s were witness to major changes in the discipline of geography. The quantitative revolution swept through the discipline just as electronic computing was becoming widely available in universities and government. The dominance of regional geography that had prevailed following World War II began to give way to systematic studies of urbanisation, industrialisation, transportation, and numerous other topics that caught the spatial topics attention of scholars. While those topics had been studied in geography in earlier times, computing and statistical techniques, especially the provision of analytical software programs, enabled searching for correlations and patterns; examination of spatial hypotheses with large data sets in less time was revolutionising the discipline of geography. What were the implications for geographic education?

During the 1960s the transition from colonies to independent countries was underway in Asia and Africa. The colonial educational heritage was largely in place in the school systems and in the civil services, that often provided oversight for education. Secondary students in newly independent countries that were part of the British Commonwealth regularly sat either the Oxford or Cambridge examinations to determine their preparedness for university study. The linkages between the examinations and admissions were strong, the examinations were largely based on the regional and commercial geography of the past, and the best way to prepare for the examinations was to study geography similar to that of the earlier twentieth century. The influence of the secondary school examinations by European universities was prominent for geography education in post-colonial Africa and Asia.

It seemed apparent that if geography education, especially at the secondary school level, was to reflect the discipline and its emerging scholarship, the examination boards would have to begin the process of identifying new standards. In countries with no comparable examinations as well as in those with examinations, changes in the curriculum, textbooks, teacher education, and professional development of teachers would be necessary. A question remained, however, regarding who was going to lead and who was going to follow as new ideas in geography were disseminated to geographic education.

The winds of change filled geography's sail for the next forty years. New and notable dimensions of geography made the transition to elementary and secondary education for several reasons. First, the quantitative revolution was requiring scholars

to change their methods and broaden their perspectives regarding the analytical aspects of geographic research. These changes, including the graphic modelling of geographic processes, were expected to disseminate to elementary and secondary school geography, just as regional geography had done in the earlier period. Secondly, the international exchange of students taking advanced degrees increased greatly during the 1960s. European and North American university departments of geography became nodes of global dissemination, as post-baccalaureate geography students completed advanced degrees and returned to their countries of origin. The numbers of faculty members in departments of geography increased, student intake increased, and geographic education at the school level was increasingly viewed as instrumental to inform new generations of young people about the opportunities in the discipline. Thirdly, the importance of geographical teaching at the post-secondary level was added as a new dimension to geographic education by the publication of *Frontiers in Geographical Teaching* (Chorley & Haggett, 1970). The book, based on a series of seminars in the early 1960s, introduced scientific models to the teaching of geography and devoted attention to the relationship between elementary, secondary, and post-secondary geographic study. The intent was to sharpen the appetite of students for geography education, ultimately making an impact on geography and on the ways it was being taught.

Statistical techniques were adopted widely in the discipline of geography during the 1960s. Those new techniques were the means to quantify and analyse both physical and human elements. Geographic study often used large data sets, with disparate factors being examined. Statistical techniques were a way to enhance the spatial analysis emerging at the core of the quantitative revolution. The new attention to quantitative analysis translated to a new attention to numeracy at the precollegiate level. Whereas observation was formerly a major goal of geography, the newly found emphasis focused students' attention on measurement; data collection from maps, aerial photos, and field studies; and greater accommodation of geographic skills to promote scientific enquiry. New data processing techniques that began with map-based, auto-correlation of rainfall and natural vegetation patterns were extended to the analysis of population dynamics using census data. The new geographic pedagogy combined method, technique, and content, and had far-reaching implications for the geography curriculum. How was that transformation of elementary and secondary curriculum to occur?

One initial attempt at large-scale curriculum reform during the 1960s occurred in the United States. The Association of American Geographers initiated the High School Geography Project (HSGP). The goal of the project was to introduce systematic (topical) geography studies in the high school curriculum (Gunn, 1972; Pratt, 1970). The HSGP was designed to provide students with an overview of the theories of geography, demonstrate the role of numeracy as an expression of spatial information (however, considerably short of the quantitative techniques used in geographic research), and introduce the ways that geography was responsive to the study of social and environmental issues. HSGP received large amounts of funding from the National Science Foundation in the United States. A major educational

company, Macmillan (High School Geography Project, 1970), published the project, but adoption among schools never achieved the expected level. Several important unintended consequences of HSGP did extend its influence beyond the United States. The new interest in geographic modelling in research was introduced in HSGP through a simulation called the Game of Farming, in which students used data to make decisions faced by farmers on the Great Plains of the United States during a period of extended drought. It was the game element that caught the attention of geographic educators on several continents.

In England and Wales, the discipline of geography was undergoing its own quantitative rethinking and review of the analytical methods critical to the future of the discipline. A group of secondary geography teachers believed the changes in post-secondary geography should be extended to secondary school geography at an appropriate level of complexity. The result was the Oxford Geography Project (Kent, Rolfe, Dearden, Rowe, & Grenyer, 1974). The inclusion of topics that were being addressed in geography theory and research (such as urbanisation, settlement, migration, land use and development) and the reliance on enquiry as pedagogy wherein students used documents, data, and significant questions to investigate issues of importance marked the Oxford Project. Pedagogical strategies such as simulations and games were a trademark of the project, reflecting a larger trend in the use of simulations in geography during this period (Walford, 1973).

The idea of national projects that presented the new geography of the 1960s to pre-university students spread to other countries. The German Federal Republic was the location of an equivalent to HSGP. Israel sponsored a similar project. HSGP classroom lessons were taught in schools in New Zealand. Games of farming and fishing became widely accepted pedagogical methods in elementary and secondary classrooms in many parts of the world. Conferences of the Commission on Geographical Education of the International Geographical Union (CGE-IGU) often featured demonstration lessons, workshops, and reports of research on student learning that were based on the ideas developed by and disseminated through the projects (Haubrich, 1987). For example, the author observed the master of geography simulations, Rex Walford, present a game entitled *The Lobster Fisherman* to a group of Japanese teachers at a CGE-IGU workshop in Tokyo. The success of the workshop was enhanced by the non-verbal elements of the simulation game, which was based on points gained by making sound decisions about where and when to fish for lobster. Simulations in geography were judged significant as the means to teach concepts and processes that demonstrated people living on Earth and using resources, whether land, minerals, or fish. The simulations linked the world at large to students by using authentic vignettes, by applying game theory from geographic research, by engaging the students in decision making for social and environmental contexts, and by selecting topics of interest and using game principles to motivate students. The early simulations preceded electronic and video games, had a clear educational objective, and made a substantial impact as a best educational practice at the time. While their use has decreased somewhat, they have been replaced by virtual reality experiences using the World Wide Web and computer software.

The 1960s to the 1990s also involved the rethinking of content and pedagogy in geography education. Topic- and concept-based instruction was viewed as having greatest educational value. The methods of teaching and activities that engaged students in learning geography were extended to encompass role playing, drama, values clarification, analysis of attitudes, and participation in civic activities (Slater, 1982). The *New UNESCO Source Book for Geography Teaching* identified economic values, social values, ecological values, and spatial values as inherent to geography teaching (Pinchemel, 1982). The 1982 *UNESCO Source Book* departed significantly in its pedagogical content orientation from the prior source books, published in 1952 and 1965 (Graves, 1982; UNESCO, 1951, 1965) and reflected not only the changes in geography education that were underway, but also the philosophy of geography education that UNESCO wanted to communicate to the global educational community. Also reflected was the UNESCO emphasis on international education during the period, which included geography, but had a more defined role in the rationale for social studies in the elementary and secondary curriculum (Mehlinger, 1981). Geography education assumed the inclusion of international education, but its contribution to the newly emerging international focus was not entirely apparent.

The *New UNESCO Source Book* (Graves, 1982) provided a view of the expectations for geography education as well as the current practices at the time. Among the topics presented for geography teaching were attention to values, curriculum organisation, simulations, problem solving, information processing, using aerial photographs, course planning, and evaluating student learning. Those topics and concerns that had emerged as the discipline of geography clarified its research and applied roles in the academy were making their way on to the global geographic education stage. The intent of the UNESCO source books was to influence instruction, curriculum, and educational policy, especially in the developing and newly independent countries.

The educational traditions and expectations that had provided geography a place in the curriculum in most countries continued to function. Interest in place name geography continued. There was increased concern with geographic literacy – the desired as well as practical level of geographic knowledge, skills, and methods needed by citizens of a country. There were opportunities to both adopt and adapt to new concepts and methods of the discipline, and those changes resulted in measured success in different countries and regions. However, at the end of the 1980s, another era of major transformation was being set in motion, largely by two major global forces that were causing geography education to be reviewed and realigned as curriculum was reviewed in many countries (Gerber, 2003a).

First, the Cold War ended and countries and populations that had not openly expressed a voice on geopolitical topics were once again being heard and observed. The major change in the new geopolitics was the reintroduction, and in some cases the introduction, of democratic ideals and the quest for the civil society as a model for building a representative, national government. Secondly, the environmental conditions of Earth in general, and some localities in particular, caused concern within the scientific and cultural communities. The big question for geography that came into focus in the 1990s was how to make the discipline and its educational mission more

attuned to the political and environmental challenges. The International Geographical Union enacted *The International Charter on Geographical Education* with the intent that students in all countries develop “increasing international competence in order to ensure effective cooperation on a broad range of economic, political, cultural, and environmental issues in a shrinking world” (International Geographical Union Commission on Geographical Education, 1992). The search for solutions to those issues by a new generation of students in different regions of the world was underway.

TURNING POINT BRIDGING THE TWENTIETH AND TWENTY-FIRST CENTURIES

The end of the twentieth and the beginning of the twenty-first centuries presented geography education with similar, long-standing questions as well as turning points for the discipline in the school curriculum. Three notable changes were

- the increased emphasis and quantity of research in geography education;
- the renewed interest in the environment; and
- a reappraisal of geography’s role in education for responsible citizenship.

Those attributes of the discipline emphasised the importance and utility of geography in the school curriculum.

One indicator of the renewed interest in geographic research was the successful inauguration during this period of *International Research in Geography and Environmental Education*, the flagship journal of the Commission on Geographical Education of the IGU. Representing the international community, scholarly submissions to the journal demonstrated a renewed interest in human-environment issues in the curriculum. Equally important was the designation of the journal for international research. Two influences were influential with this journal. One was inclusion of research as an important element in what geography and environmental education scholars produced, and the second was the inclusion of geographic educators from across the international community.

The redefinition of environmental education relative to geographic education continued to gain prominence during this period. Considerable attention was devoted to environmental issues in the context of global change research. Scholarly books were published that staked out the ground within geographic education that was complementary to environmental education. Is environmental education really geography education? *Understanding Geographical and Environmental Education* (Williams, 1996) took the position that much of what is studied in geography is focused on the environment, and much of what is considered to be environmental education is very nearly the same as what geography educators research, write, and teach in their work. For practical purposes, little distinguishes geographical education from environmental education. In *Geography and Environmental Education International Perspectives* (Kent & Jackson, 2000), the descriptions of research, writing, and teaching demonstrated considerable overlap. This was an important milestone for

geography education for two reasons. First, geography education has a long tradition of dealing with environmental content and addressing environmental issues. Secondly, the environment has caught the attention of policymakers and educational decision-makers worldwide. Traditionally, geography is viewed much more narrowly, or strictly as geomorphologic or social studies. There was good reason for geography education to engage in issues of environmental education, since the essential components are inherent to the discipline (Zhang & Foskett, 2003).

The growth and development of computer cartography, Geographic Information Systems (GIS), and remote sensing have added to the methods and skills of academic geography and have numerous applications to geography education. Access to data analysis and mapping as well as portability using laptop computers is increasing the reach of students. The World Wide Web and Internet have provided access to databanks, individuals, special interest groups, and governmental and other public reports that democratise individual and group decision-making. The premise that information enables people to make informed decisions regarding important environmental issues is a long-standing belief in geography education. Geographic education has an important role in the democratisation of information and its uses.

A second change affecting geography education during the two decades bridging the millennium was its role in citizenship education. While citizenship implies a legal status with residency rights, it is interpreted somewhat differently depending on the national political context. There is a common element when geography education is considered. Citizenship implies the responsible and meaningful participation and contribution to society. Geography's role in citizenship education has a substantial tradition (Barker, 1927), but is underrepresented in terms of its specific contributions. Citizenship education includes knowledge of government, civic responsibility as a member of a community and country, and participation working towards the common good. Geography education makes contributions to citizenship through environmental decision-making, critical thinking about the relationship between citizenship and responsibility, developing a sense of place, and clarifying values relative to ideas about people and countries. However, the contributions of geography were not capitalised upon adequately, perhaps due to geography teachers' viewing their role as teaching content, rather than considering future applications to life outside of school, where the role of citizen would be enacted.

Citizenship and preparing elementary and secondary students for responsible participation in the decision-making processes in their community and country often are viewed as similar educational goals. Both are important components of the curriculum, whether as a specialised course or as an integrated component of several courses, including geography and history. A widely cited research study found that most respondents did not readily connect geography education to citizenship (Torney-Purta, Lehmann, Oswald, & Schulz, 2001). The increased attention to citizenship education suggests both a challenge and an opportunity for geography to participate if a meaningful relationship is established between the curriculum goals of each topic. It also seems that the long-term benefits to geographic education of a stronger

relationship between geography and citizenship will be positive (Geographical Association, 1999).

The search for meaning in the relationship between geography and citizenship has been underway for decades. However, recent attempts to clarify that relationship have taken on new momentum. The national context of citizenship and geography education has been studied and discussed in England and Wales (Lambert & Machon, 2001). While the recent attention to geography's role in citizenship was the result of political concerns, geography's role as a means to promote citizenship values has been incorporated in textbooks to some extent for a considerable time. Another view of citizenship is the nested relationship between individual and spatial entity. For example, a Yoruba is a citizen of an indigenous political unit, citizen of a Nigerian state, and at the same time a citizen of Nigeria. Those geographic relationships of citizenship are dynamic and become a lifelong engagement for people (Williams & Humphrys, 2003). Changes in economic development and migration patterns have resulted in globalisation that brings people into new and changing citizenship roles.

In 2003, the fourth international guide for geographic education, the *International Handbook on Geographical Education* (Gerber, 2003c) was published. Similar to the earlier handbooks, the fourth presented a window on geography education with attention to where it either could, or should, be directed. The fourth book, published nearly twenty years after its predecessor, reinforces the notion of turning points in geography education. The navigational markers in the *Handbook* reflect some recurring topics, but some explorations in uncharted waters are included. The enterprise of geographic education is constantly changing course, but some course corrections are larger than others.

TURNING POINT FUTURE TRENDS

Currently, several strong indicators suggest new directions, or at least navigational adjustments, for geography education. The first arises out of the concern for increased public scholarship. This means the use of the intellectual capital of a community or region to address the issues that commonly afflict the residents and the environment. For example, natural disasters not only require a response readiness, but increasingly are viewed as needing mitigation of impacts. Those mitigating activities are deeply dependent on education, and geographical education is a major contributor (Stoltman, Lidstone, & DeChano, 2004). Preparing students in geography to know about their local community, the relationship to the environment, and the consequences of certain environmental conditions goes a good way towards responding to natural disasters, but not adequate. Specific study and planning by students for home, school, and community mitigation actions and preparations are practical applications of geographic education. The frequencies of natural disasters that affect large populations have increased social and economic costs. Education of both the student and general populations about living with and preparing for natural events is an important role for geographic education. Public scholarship, the direct concern for the public in research

topics and outcomes, and geographic education have common interests at every scale of enquiry.

Globalisation is a revived topic in geographic education that has again gained importance. In hindsight, the topic was first addressed at a different magnitude and global scale in Turning Point I, as well as in each subsequent period of geographic education. The Columbian exchange between the Americas and other regions of the world was largely the movement of crops and ideas. Later came the migration of people. In the twenty-first century, it has become the movement of information, outsourcing of jobs, and layers of economic citizenship within regional organisations. Few places and people on Earth are immune from the direct influence of other places and their residents. When direct influences are not apparent, then indirect influences, often through the atmospheric transfer of elements such as carbon or the broadcast signals from satellite radio, provide evidence of connectivity. Those future trends are linked to the past in geography education through our theories of spatial interaction and significance of place (Gerber, 2003b).

CONCLUSIONS

Geography education is a subject that is servant to many forces in the curriculum and in society. Curriculum realignment may occur at the national level. Budgetary changes may dictate adjustments in geography teacher positions. Geography education must compete with other sectors of the economy for graduates. Geography education may ride the coat-tails of new technologies to achieve greater public visibility. The consequence of pushes and pulls in economies and societies are geographic, and geography education is expected to explain and provide plausible solutions to related issues.

The issues that continue to guide the navigational course of geography education demonstrate a good deal of consistency over time. Changes are evident in the intensities of the issues at particular times and the residual impacts they have on the study of geography. Global military conflict is a major issue, and the residual effects from outside geography education often have considerable impact on what is included within the curriculum. On the other hand, the quantitative and technological revolution within geography also affects the curriculum. Computers are making big changes in the amount of geographic information available to individuals, alternative ways to organise information, and the means to map information for visual analysis and presentation to others. Each change results in some degree of navigational change for geographic education, and those changes become turning points. The turning points presented in this chapter have been key in defining and redefining the craft of the geographic educator, the challenge for students, and the benefits to society.

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HARTWIG HAUBRICH

CHANGING PHILOSOPHIES IN GEOGRAPHICAL
EDUCATION FROM THE 1970S TO 2005
AN INTERNATIONAL PERSPECTIVE

INTRODUCTION

Since the International Geographical Congress in Tokyo in 1980 I have been interested in developments taking place in geographical education around the world. Colleagues and friends from all continents have sent me reports of the current situation of geography teaching in their countries and their data were published in two books *International Focus on Geographical Education* (Haubrich 1982) and *International Trends in Geography Education* (Haubrich 1987). The first part of this chapter draws on these publications.

In 1995, as Chair of the International Geographical Union Commission on Geographical Education (IGU-CGE) I invited geographical educators scattered around the world to complete a questionnaire. This was designed to gain an understanding of the current state of geographical education in the selected countries in 1995. The findings were presented in a report, *State-of-the-Art in Geography Education*, at the International Geographical Congress held in The Hague in 1996. The findings were published in the *Newsletter of the IGU Commission on Geographical Education No. 32* in June 1996.

Ten years later, in 2005, I undertook a similar study. This time I had the opportunity, as evaluator of the Herodot Network (a Union of European Geography Departments, and of Eurogeo, a Union of European Geography Teachers' Associations) to meet experts in geographical education face to face to ask them to complete the same questionnaire used in 1995 (See Appendix A). It proved difficult in 1995, and again in 2005, to contact colleagues in Africa, Latin America, Asia and particularly in the Arab World. Hence, most contributing countries are "Western" countries from Europe, North America and Australia. I used the Delphi-Method for my comparative international study again. The experts were not the same but the countries and the number of countries are almost identical. The results are not representative in a statistical sense but the structures of the outcomes are so meaningful that they contain a strong message. I am grateful to all of the respondents whose names and countries are listed in Appendix B. The second part of this report is a comparison of the outcomes from 1995 with those from 2005.

PHILOSOPHIES IN GEOGRAPHICAL EDUCATION FROM THE 1970s
TO THE 1980s

Geopolitically, the 1970s and the 1980s were distinguished by great divisions, in Europe the rift between East and West and the world split between North and South. For example, the aims of geographical education in the preamble to Italy's official curriculum were related to the "humanistic and Christian tradition which recognises the dignity of the individual and the respect for spiritual freedom, necessary for a complete education of the individual" (Valussi, 1982, in Haubrich, 1982, p. 186). However, Poland gave geographical education the function of rational and, at the same time, critical assessment of the mutual relations between nature and society, that is, of the "man-environment-system" and regarded it as an "excellent antidote against the national megalomania on the one hand, and against the inferiority complex on the other – last but not least against chauvinism and racial prejudices; it lays the psychological foundations for respect and mutual understanding between nations and societies" (Barbag, 1982, in Haubrich, 1982, p. 158). British geographers saw their teaching aims very differently. They emphasised the practical, whereas geographers in socialist countries were very conscious of clearly fixed aims, which were integrated into the framework of the socialist education of man. A British author wrote "The average teacher is inclined to be pragmatic and to teach what appears to work ... and his aims are implicit rather explicit" (Graves, 1982, in Haubrich, 1982, p. 92). At the Thirteenth Congress of Czechoslovak Geographers in 1977 the teaching of geography was given great attention. Here it was argued geography should form socialist personalities. Other aims included "The contribution of Geography towards a materialistic perception of the world by considering the dialectic relation between nature and society, the fight against racism, as well as Marxist philosophy and political economy, in order to develop the relation to the community of socialist countries, feeling for the mother country, socialist patriotism and internationalism" (Sperling, 1982, in Haubrich, 1982, p. 67). The aims of geographical education in India and of Brazil were very different. On the one hand, an Indian commentator appealed to "interplanetary brotherhood" (Pande, 1982, in Haubrich, 1982, p. 163) in a utopian and surrealistic way and, on the other hand, the Brazilian aims had a strong relation to scientific concepts. Here geographical education had the function of developing knowledge and skills that should help students to understand the spatial dimension of the world. The concepts were localisation, orientation, interaction, spatial organisation, identification, spatial distribution patterns, spatial and temporal processes, movement. The contents of these concepts were related to the school, the community, the state, the country, the continent and the World (Oliviera, 1982, in Haubrich, 1982, p. 50). Nations which did not have any major problems with their neighbours, such as Belgium, possessed more domestically oriented and abstractly formulated aims such as "responsible, political and ethical behaviour as user of space in a framework of a socio-spatial system" (Branden, 1982, in Haubrich, 1982, p. 40). People in crisis regions such as Israel developed strong patriotic aims, for example "to promote strong sentimental attachment to the homeland, understanding for its problems and

necessities, devotion to the national efforts and objectives and appreciation for the achievements in developing and building up the country” (Brawer, 1982, in Haubrich, 1982, p. 181). In Israel, geography was predominantly the geography of the home country.

Patriotic, cosmopolitan and emancipatory geographical aims could be found in all systems and at all levels of development but always with a different priority. On the one hand, patriotic aims were dominant in the Third World and in socialist countries – the cosmopolitan aims could be either more liberal or more offensive – and, on the other hand, the emancipatory aims in the form of “attitudes” were on the advance in Western industrialised countries such as Great Britain, the USA, New Zealand, Australia, West Germany and other West European states. New Zealand saw the social perspective in the “marked accentuation of environmental education, that means in the commitment towards an appropriate use of the environment and in the ability to take part in environmental planning” (Slater, 1982, in Haubrich, 1982, p. 215). Frances Slater suggested, “Such aims can only be achieved by the study of social conflicts” (Slater, 1982, in Haubrich, 1982, p. 215).

The field of geographical education was very different from country to country and often from region to region within one country. The aims of geographical education always have been a mirror of the political, social and economic situation of a country. According to the extent to which a society was “open” or “closed” and fixed on an ideological path, the educational system was characterised by “law and order” with an impressive order, or by “chaos and creativity”. Politics, history, culture, economy, religion, nature and society and the nation’s development level were the essential factors which determined the educational aims for geographical education.

PHILOSOPHIES OF GEOGRAPHY EDUCATION FROM 1995 TO 2005

As mentioned in the introduction the following international comparative study is based on questionnaires filled in by professionals in geography education each time from more than thirty countries in 1995 and 2005. The outcomes are not representative but they contain a clear and strong message

Regional and General Geography

In 1995 regional geography (Figure 1) played a major role in geography curricula, but it was even stronger in 2005. It played a strong role in many developing countries, in socialist countries and in some Western countries with traditional systems. So-called progressive Western countries substituted a conceptual or thematic approach for this regional approach. Some, such as Germany, which did the same, came into trouble with parents and other parts of society. They made curricular compromises by mixing the regional approach and the thematic approach into a regional-thematic approach. The encyclopaedic structure of “land-after-land” geography teaching had been abandoned nearly everywhere by 2005 but there are still some countries where a quite descriptive

regional geography is taught (Fodor, 2003). On the other hand, the so-called “transformation countries” in Eastern-Central Europe were experiencing a “chaos of change” from their traditional approaches to more “western, democratic” approaches, because their school systems changed into a variety of school types and the centralistic directives of their governments have been given up and have been substituted by a decentralised system (Horvath & Probal, 2003). Most teachers were not prepared for such a new independent teaching of geography.

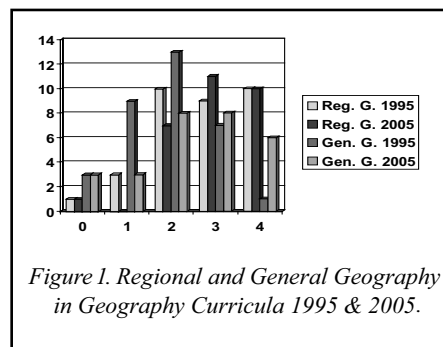


Figure 1. Regional and General Geography in Geography Curricula 1995 & 2005.

General geography (Figure 1) refers to teaching according to the scientific system of the subject geography, that is physical geography (such as geomorphology, climatology, hydrology, biogeography) and human geography (such as population-, settlement-, agriculture-, industry-, political geography). In 1995 most countries showed a weak or moderate systematic approach in their geography curricula, but by 2005 many more practised a strong and even very strong systematic approach. This does not mean that they have a pure systematic approach but a much bigger part of their teaching follows the scientific system of the subject geography. The explanation for this trend seems to be, that these countries try to put more emphasis on the teaching of geographical structures and processes than on the teaching of geographical facts, in order to gain a deeper understanding of spatial relations.

Issue-based and System-based Geography Curricula

Over recent years there has been a trend to give up teaching according to the system of the subject geography, that is, according to regional or general geography. Now, some countries have concentrated on the “big problems” of the world. This does not mean that every time there is a change from a subject-oriented to an interdisciplinary approach. But, nevertheless, the teaching of issues (Figure 2) in geographical education has involved crossing subject borders. School geography ceased to be a copy of its related university subject. Teachers of school geography have wanted to qualify their students so that they would be able and willing to understand, and contribute to solving, the many current and future problems of the world. Figure 2 shows that in 2005 fewer countries have weak or moderate issue-based curricula and more countries concentrate on issues strongly or even very strongly. It seems that already in 1995 many countries wanted to do something for the solution of issues of our time through geographical education.

System-based geography (Figure 2) means not a systematic approach but a quite new kind of scientific approach. Spatial systems as ecosystems or human-earth systems

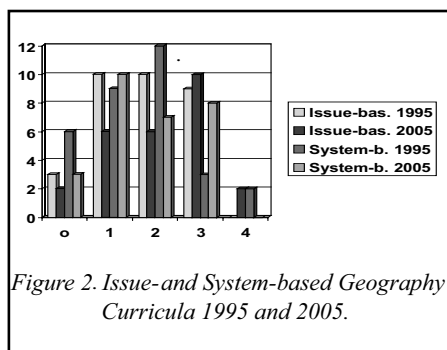


Figure 2. Issue- and System-based Geography Curricula 1995 and 2005.

stand in the centre of scientific research but are also of educational interest. This approach is defined by a system and not by an individual subject. It crosses the subject borders and therefore requires interdisciplinary co-operation. Many geographers identify themselves as human or physical geographers. This is now an historical notion for those who are interested in systems research, that is research into the physical and human factors, interrelations and processes of a spatial system. For geographical education, this is quite a new and challenging approach. In 1995 it had been practised in just a weak or moderate way in most countries. Now, more countries show a strong system-based geographical education, but a new trend cannot be observed.

Factual and Conceptual Knowledge

There are innumerable geographical facts drawn from around the whole world and in earlier times geography lessons meant learning facts and then more facts. An average brain was inadequate to carry such an encyclopaedic load. Has this changed now? As Figure 3 shows, facts are emphasised in all countries. In very few countries is this undertaken in a weak or moderate manner. In most countries there is a heavy concentration on facts. In 2005 factual knowledge is emphasised in even more countries than in 1995. It is obvious that nearly all countries want that their students get a solid and broad knowledge of geographical facts.

Concepts require a deeper understanding than facts. The hydrological cycle is an example of a concept from physical geography and the central business district is an example from human geography. In Figure 3 it is obvious that most countries try to teach concepts in a strong way. But that was already the case in 1995, that is, it remains similar in 2005, although the number of countries where concepts are taught in a strong or very strong manner, became a little bit smaller. On average, teaching concepts was and continues to be very important. Teachers seem to be more conscious of the cognitive level of their geography teaching.

Skills and Values

Skills in geographical education include finding, analysing, processing,

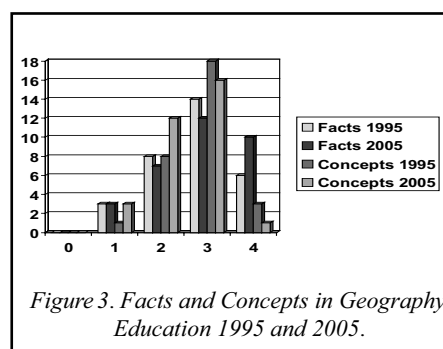


Figure 3. Facts and Concepts in Geography Education 1995 and 2005.

evaluating, presenting and using geographical information. In 1995 and in 2005 there was no country which did not teach skills (See Figure 4), but in more countries skills were taught in a weak and moderate way in 1995 than in 2005, that is, the maximum number of countries has been teaching skills in geographical education in a strong and very strong manner in 2005. Developing abilities for mastering unexpected situations in future private, professional and public

life is a new trend. *Lifelong learning* or *Learning to learn* are the concepts which are now increasingly encountered in more and more countries. Also in this teaching area teachers know what is important in geographical education.

Geography teachers have the task of preparing students for their future life. To master life situations means, as referred to in the previous paragraph, finding information, processing, interpreting and evaluating data, making judgements and decisions and behaving consistently with declared attitudes and values (Haubrich, 1992, pp. 1–8). To find the right solution for a problem means also to know potential alternative solutions. Choosing the right alternative cannot be decided just by subject knowledge. For that reason it is necessary to take into account such values as social justice, environmental protection, human rights, and equality. Geographical education has the task to educate students to become qualified decision makers who know the values behind their decisions, for example, they know who benefits from and who is disadvantaged by a decision, so that, hopefully, they act according to globally acknowledged values. In Figure 4 one can see that in 1995 values played just a moderate role in most countries. By 2005 this situation had changed slightly, that is, more countries are more value-oriented in a strong or very strong manner.

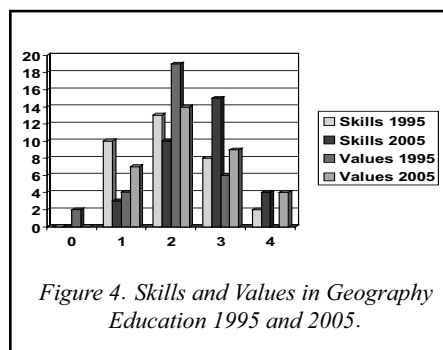
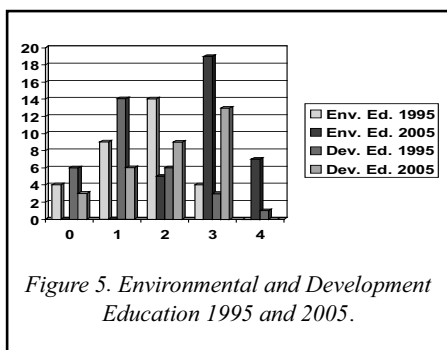


Figure 4. Skills and Values in Geography Education 1995 and 2005.

Environmental and Development Education

It is obvious that environmental education (Figure 5) has an extraordinary importance in geographical education. It may be that the IGU-CGE journal, *International Research in Geographical and Environmental Education*, (IRGEE), has contributed to this new trend. Around the world people are becoming increasingly environmentally conscious and geography teachers are trying to counter materialistic thinking and growth ideologies. The maximum number of countries practised environmental education in geography in 1995 in a moderate way, but in 2005 they gave environmental education a stronger and higher priority. The recent catastrophes around the globe are first signs of big dangers for the future, and the human factors in such disasters, which are acknowledged by nearly all scientists, cannot be minimised.



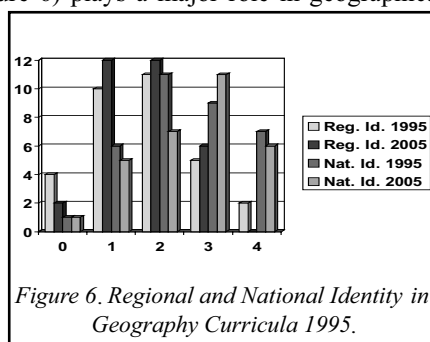
In the 1960s and 1970s development education meant analysing the situation in so-called “underdeveloped countries” and learning the need for development aid. In the 1980s and 1990s the term “underdeveloped” was substituted by the term “developing” and “development aid” was replaced by “development and co-operation”. Teaching regionally meant to teach about Africa, Latin America and Asia, that is, teaching about developing

countries from the perspective of “development and co-operation”. It is interesting to see in Figure 5 that in 1995 development education had a weak position in most countries and this has changed by 2005 to a strong position in many countries. There is no sign that the current world-wide economic crisis has led to a neglect of development education. Geography teachers in many countries seem to be aware of their global responsibility.

Regional and National Identity

Regional identity (Figure 6) means to develop roots in one’s home region. Home region does not mean home country or home nation but a region within a nation state. The subsidiary principle is the concept that regional administrations or governments should have the right and duty to do everything in their own region that they can do independently and alone for themselves without directives from “above”. This decentralised concept can succeed when people who are living in a region obtain sufficient knowledge about their region and develop emotional attachments to their home region. This decentralist system has a high priority in many federalist countries but not so much in centralist countries. It seems that most countries have a centralist system because in most countries geography teaching aims at regional identity in just a weak or moderate way not only in 1995 but also in 2005.

Contrary to this national identity (Figure 6) plays a major role in geographical education. In 2005, more than in 1995, in most countries attempts were made to develop a strong or even very strong national identity. National governments have normally more power than regional administrations and therefore make a bigger impact on the educational aims of their schools. National governments of every colour want their schools educate their students so that they are able and ready



to act in solidarity with their nation. Therefore national identity plays a big role and also a bigger role than regional identity in geographical education.

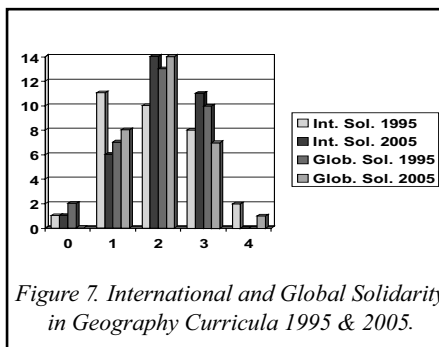
International and Global Solidarity

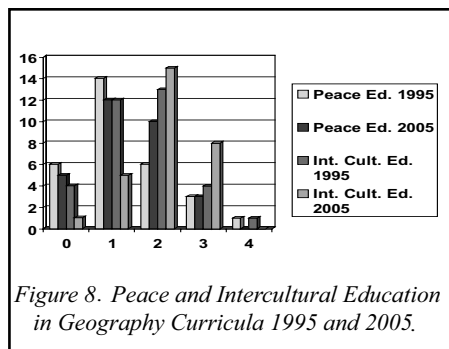
Over several decades promoting international solidarity (Figure 7) has been one of the main aims of geographical education. In geographical education a high priority has been given to gaining sufficient knowledge about neighbour states, the countries of one's own continent and a selection of other countries in the world and to developing good and friendly relations with them in order to co-operate efficiently and peacefully. This was particularly so at that time when regional geography was *en vogue*. In Figure 7 one can see that international solidarity played a weak and moderate role in most countries in 1995 but by 2005 the situation had improved, that is, more countries taught international solidarity in a moderate or strong manner. But the situation had not changed dramatically.

Global solidarity (Figure 7) is a quite new concept. The globalisation of economic, environmental, cultural, political and other processes is becoming stronger and stronger and it is leading to deep structural changes in all areas of the world. This global change is of existential importance for many people, who cannot understand and often cannot accept these changes. We are now living in a "global village" or in "Spaceship Earth". "Think globally and act locally" means global solidarity. But what has happened in geographical education? By 2005 more countries taught global solidarity just in a weak or moderate way and less in a strong way, just one country in a very strong manner. This is both a surprise and evidence of a serious deficiency in the subject.

Peace and Intercultural Education

Disparities, inequalities, different fundamentalist ideologies, stereotypes, misunderstandings and others are serious causes of trouble and even for war between countries and within countries. To learn to understand these circumstances is a task for geographical education, when teachers teach about foreign countries or relations between countries. But it is not sufficient to understand the differences and difficulties, it is also important to learn to look for peaceful solutions. Peace education is an essential part of geographical education. But are geography teachers conscious of that? Figure 8 shows that peace education played a minor role both in 1995 and in 2005.





Intercultural education (Figure 8) means learning to understand the differences between cultures within one's home region or country. There are already many multicultural societies, but the current migration is so strong that more and more countries are changing to multicultural societies. In order to accept cultural differences and to co-operate with others peacefully it is a precondition that one understands people from other cultures and communicates with them whenever and

wherever possible. Geography teachers are now being encouraged to implement and to practise intercultural education. Unlike peace education, intercultural education has been progressing from 1995 to 2005 and it is much stronger than peace education. There are many countries in which intercultural education is taught in a moderate or strong but not in a very strong way.

Socialist and Capitalist Directions

The fall of the Iron Curtain marked the end of totalitarian socialism (Figure 8) in many countries. Also the educational systems in the affected countries adopted more democratic "Western" styles. One should not forget that before 1989 geography teaching in many socialist countries meant to teach about socialist countries in one year and about capitalist countries in another year. The world was divided not just ideologically but also educationally. Often one could read in the preambles of geography curricula in communist countries Geography Education should build socialist personalities or Socialism is more able to use the resources of the World than capitalism (Maksakowsky, 1987, in Haubrich, 1987, p. 334). Following the fall of the Iron Curtain, most former socialist countries had already by 1995 given up their socialist directions in geographical education, that is, they did not teach socialist directions at all or only in a weak and moderate way. However, there were still a few countries where socialist directions were taught in a strong and even very strong way.

While socialism is the loser, capitalism is the winner in the current world. Most states are seeking to solve their economic and social problems through the introduction or expansion of capitalist structures. Although capitalism seems to lead to a more prosperous economy, many people are becoming poorer and the gap between the social strata is becoming wider and wider. How has geographical education reacted to this trend? Figure 8 shows that in 1995 many countries already taught about capitalism in a moderate or strong way but there were more in 2005. The capitalist directions

of geographical education have been progressing in 2005 even from a high level in 1995.

Individualist and Collectivist Directions

Alongside other features, capitalism means economic growth through competition. The winners in the capitalist race will be those who have developed their own strengths as much as possible. Of course, the winner may use his or her success for himself or herself alone but he or she may also use the success for the well being of weaker members of society. For education and also for geographical education does this mean the strengthening of the individual through independent learning, individual projects and presentations, geography competitions or Olympiads. Of course, the danger of this approach is that students can become individualistic or egotistical.

But in a capitalist, free market system everyone is asked to develop his or her abilities as much as possible in order to be able to compete. Has this kind of thinking been an element in geographical education? In 1995 and in 2005 most countries did not practise individualist directions (Figure 9) not even in a weak or moderate manner. Geography teachers do not seem to be conscious of individualist directions.

The same seems to be true for collectivist directions (Figure 9). Collectivism is a term with various meanings. Some former socialist countries used the term to refer to the family, social group, community and society having priority over the individual. Promoting this social behaviour was a main educational aim. In Western, democratic, free market systems collectivism meant something different "No freedom of the individual". The individual was seen as being forced to give priority to the society and therefore one could not develop as one would want to. For Western cultures, the term collectivism was combined with socialism, communism and injustice. Were these dichotomies part of the thinking of geographical educators? In 1995 collectivism had been taught not at all or in a weak or moderate manner in most countries. By 2005 two countries taught collective directions in a very strong way. It seems that most teachers are not conscious

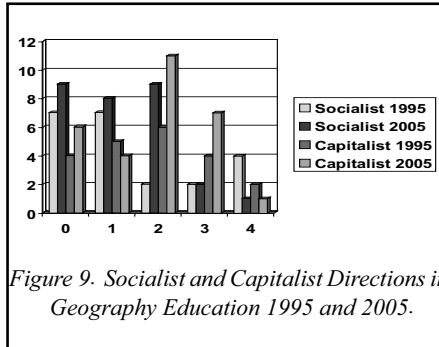


Figure 9. Socialist and Capitalist Directions in Geography Education 1995 and 2005.

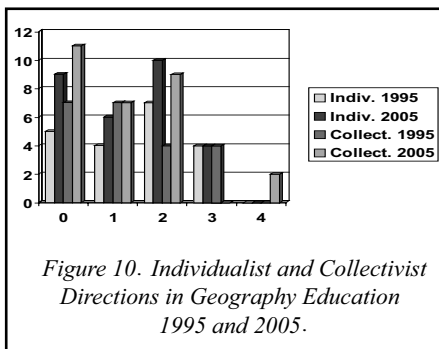


Figure 10. Individualist and Collectivist Directions in Geography Education 1995 and 2005.

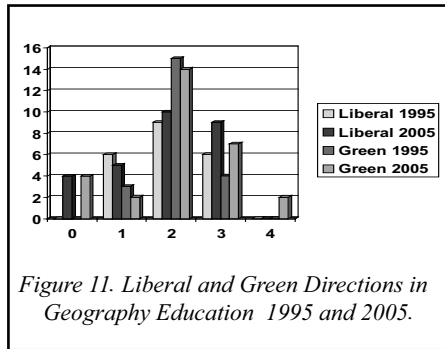


Figure 11. Liberal and Green Directions in Geography Education 1995 and 2005.

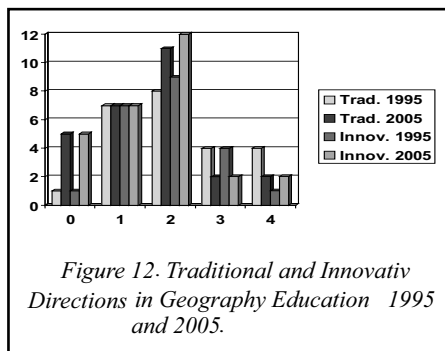


Figure 12. Traditional and Innovative Directions in Geography Education 1995 and 2005.

of the individualist or collectivist directions of their teaching.

Liberal and Green Directions

Liberal directions (Figure 10) in geographical education mean freedom in nearly every sense. Liberals do not like left or right ideologies. Their highest priority is liberty. With the division of the world into ideological blocs, many people wanted liberty from every control. But it was obvious that liberal directions are more a part of free market ideologies than central planning market ideologies. But liberal directions can also lead to empowering the rich and to neglecting the poor, so that the gap between social strata becomes wider and wider. What role have liberal directions played in geographical education? In 2005 more countries practised liberal directions in a moderate or strong way than in 1995, but no country in a very strong way. There is no clear maximum, which

means, promoting liberal directions is not a conscious intention in geographical education.

Green directions (Figure 10) are, of course, directions concerned with environmental protection and preservation. “Green” has become a very familiar concept in many contexts. Green directions in geographical education are not new and already in Figure 4, we could see that environmental education plays a prominent role in geography teaching. Also this diagram (Figure 10) shows progress from 1995 to 2005. The number of countries, which teach green directions in a strong and very strong way, has grown from an already high level in 1995. Nevertheless, there are also some countries that neglect environmental education.

CONCLUSION

Figure 12 summarises the opinions of those professionals in geographical education who completed the questionnaire (Appendix A). My aim was to learn how these educators evaluated their general situations in geographical education. But what is meant by both traditional and innovative directions? The term traditional should be a clear and understandable concept. Traditional directions should mean, there is a

structure that has not changed for a long time. Because time is running faster than ever, geographical education needs to react to regional, national and global changes. If there has not been any change, traditional directions could also be called conservative directions. What has happened between 1995 and 2005? There were more countries in 2005, which did not follow traditional directions, that is, they had changed to non-traditional directions. The same is true for those countries that taught traditional directions in a moderate way, but this is not true for those, which taught traditional directions in a strong or very strong way. Moderate is the key term for the traditional directions in geographical education.

Contrary to traditional directions, innovative directions have changed to new structures, concepts and intentions. These may be reflected in, for example, theory and practice, aims and objectives, curricula, media, methods, and assessments. What is now the average opinion of the education experts who responded to the questionnaire? In 2005 there are more countries than in 1995 which are not at all innovative; there are as many countries, which were innovating in a weak way in 1995 as in 2005. Those that implemented innovations in a moderate way increased in number, but those with strong innovations decreased. Only two countries show very strong innovations in 2005.

If one compares the distribution of the traditional and innovative directions, the structures of both are more or less the same. There is no majority of countries with strong traditions and no majority of countries with strong innovations. Beside few with no or very strong innovations and traditions the majority had traditional and innovative directions in a moderate way. Moderation is the keyword characterising the changing philosophies of geographical education from 1995 to 2005. Contrary to the 1970s the ideological differences nearly disappeared and it can be seen that the international community of educational geographers have more contacts and know more about what is going on in other countries.

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APPENDIX A QUESTIONNAIRE USED IN THE 1995 AND 2005 SURVEYS

Questionnaire Directions and Contents of Geography Teaching in Secondary Schools

Filled in by

For the following town, region or nation Date 2005. September

1. Educational Directions

Please refer to your local, regional or national curriculum and mark the following with 0 for “not at all”, 1 for “weak”, 2 for moderate”, 3 for “strong”, 4 for “very strong”.

1. How do the following directions determine your geography curriculum?

- a. Education for regional identity
- b. Education for national identity
- c. Education for international solidarity
- d. Education for global solidarity
- e. Environment education
- f. Developing education
- g. Peace education
- h. Intercultural education
- i. Citizenship education
- j. Other directions as.....

Please add some remarks!

2. How do the following dimensions determine your geography curriculum?

- a. Factual knowledge
- b. Conceptual knowledge
- c. Skills
- d. Values and attitudes
- e. Behaviour and actions
- f. Others.....

Please add some remarks!

3. How do the following approaches determine your geography curriculum?

- a. Regional approach (Home region, home country, home continent, continents, World)
- b. Systematic approach (Geomorphology, hydrology, urban geography, etc.)
- c. Issue-based approach (Hazards, hunger, energy, inequality, etc.)
- d. System-based approach (Physical systems, human systems, ecosystems)
- e. Mixed approaches of.....

Please add some remarks!

4. How do the following philosophies/ideologies determine your curriculum?

- a. Socialist Directions
- b. Capitalist
- c. Liberal
- d. Green
- e. Individualist
- f. Collectivist
- g. Conservative
- h. Progressive
- i. New Lifestyles
- j. Others as.....

Please add some remarks!

Thank you so much!

Prof. Dr. Hartwig Haubrich/University of Education/ Freiburg/Germany

APPENDIX B COUNTRIES/REGIONS AND EDUCATIONAL GEOGRAPHERS
INCLUDED IN THE 2005 QUESTIONNAIRE STUDY

Australia (Queensland)	John Lidstone
Australia (Tasmania)	Margaret Robertson
Austria	Barbara Mayerhofer
Belgium (Flanders)	Yvan Vandewalle
China	Wang Min
Czech Republic	Alois Hynek
Czech Republic	Vladimir Herber
Estonia	Ülle Lüber
Finland	Eila Jeronen
France	Valerie Kociemba
Germany	Hartwig Haubrich
Greece	Nikos Lambrinos
Hungary	Ferenc Probald
Israel	Yoram Bar-Gal
Italy	Barbara Gambini
Japan	Yoshigasu
Lithuania	Donatus Burneika
Luxembourg	Carole Trausch
Malta	Moira Buttigieg
New Zealand	Lex Chalmers
Poland	Danuta Pirog
Portugal	Cristina Camara
Romania	Zoltan Pal
Russia	Vladimir Gorbanyov
Singapore	Goh, Kim Chuan
Slovakia	Vladimir Drgona
Slovenia	Tatjana Resnik-Planinc
Switzerland (Bern)	Martin Hasler
Switzerland (Solothurn)	Raymond Treier
UK (England)	Margaret Roberts
UK (Northern Ireland)	Margaret Keane
USA	Sarah Bednarz

ASHLEY KENT

CHANGING LEARNING AND TEACHING

This chapter offers a wide international context for the theme of changing learning and teaching in geography education. My comments are based on international surveys conducted by Haubrich (1996), Gerber (2001), Naish (2001), my own survey (2001) and literature from the world of geographical education, not least from the major IGU Congress held in Glasgow in 2004. I focus on four areas concepts of learning and teaching; learning and teaching in classrooms; learning and teaching in the field; and the role of new technologies.

As a preamble, these are some general observations. Underpinning everything, geography occupies an uneasy place in the curricula of nations – in some instances it is found in curriculum frameworks in which the word geography itself does not exist; in several countries the number of students taking the subject is on the decline; “making the case for geography” to politicians has not always been successful; it is under particular threat in the developing world; it faces severe competition from established subjects such as history and newer subjects such as business studies and Information and Communications Technology (ICT). Although Gerber concluded his international survey with “cautious optimism”, I agree with Rawling (2004, p. 169) who stressed that “we must recognise the real threat to our subject and be prepared to take immediate action within our own communities”. Underlying some of these concerns is that geography has an image (see, for example, Kent, 1999; and Kent 2000) of being both outdated and inaccurate. As Walford noted, “... belatedly we are becoming aware that the public image does matter ... the layman’s views cannot be dismissed lightly ... we all need to be alert to the public relations task which is needed, for the good things which geographers and geography students do ... it is a strategy to ensure that when decisions about the future of geography are taken by non-geographers, they will be approached on good evidence, and not on recollection, imagination and hearsay” (1984, p. 203).

As to geography’s position in the curriculum my international survey (2001) suggested that geography is not in a stronger position in the curriculum today than ten years ago nor would it be stronger in ten years time – in other words my correspondents had the clear sense that geography’s curriculum position was and would be slipping in the future.

Perhaps one reason is that geography does not sufficiently “grab” students’ interest and enthusiasms – the specific reason why “Geovisions” was established in 1998 in England as a “forum to debate, raise issues and make proposals about the future of school geography” (Lambert, Martin & Swift, 2005) – in particular to fire youngsters

with a geography meaningful to their lives. Related to this is the need to raise the quality of students' thinking in geography classrooms – too many students experience low level, non-authentic lessons with little intellectual challenge. Since the mid-1990s the inspection agency for England, OfSTED, in its annual reports has consistently pointed to geography teaching of 11–14 year olds as being of “low quality” and at primary level (5–11 year olds) it is regularly castigated for being one of the worst taught subjects.

Another and related concern is that the “worlds” of school geography and higher education geography have drifted apart – indeed Goudie (1993) has argued that a “chasm” has appeared with two-way communications and mutual benefit being lost. Marsden (1997) has argued that there have been long-standing tensions between geographers and geographical educationists about the balance in the geography curriculum of three critical components subject content, educational processes and social purposes. He has argued that “geography educationists have become pre-occupied with the detail of curriculum planning and with polemics over the social purposes of the curriculum neglecting new developments at the frontiers of the subject” (1997, p. 241). No wonder, Marsden implies, that academic geographers are less engaged with school geography. Stoltman and De Chano (2003) illustrate the point graphically by showing where selected books and articles in geography education are along a scientific (geographic) to educational theory continuum (Figure 1).

Furthermore the health of school geography relies on sufficient numbers of high quality geography teachers trained to the highest level (see Kent, 2004). Teacher supply varies widely. On the one hand, in the USA and the Netherlands there is a shortage of teachers whereas in Portugal and Hong Kong there are now less geography teaching jobs available. Some countries, for instance New Zealand and South Africa lose recently trained teachers to other countries and others have an ageing teaching force and there is beginning to be a worrying loss of mentor expertise as some retire (USA, New Zealand and England). Retaining recently trained teachers is proving a problem in New Zealand, England, Portugal and Switzerland as the teaching profession is increasingly seen as, indeed is, stressful and difficult. This retention problem is exacerbated when economies are buoyant, unemployment rates low and graduate geographers have strong alternative career opportunities.

Finally there is the challenge to maintain, hopefully strengthen, the fieldwork tradition of geography in those countries where geography is well-established in school curricula. In other countries the case needs to be made to introduce fieldwork as a norm for school geography courses.

CONCEPTS OF LEARNING AND TEACHING

Arguably from the 1960s learning and teaching in schools world-wide has displayed four trends that reflect different perspectives held by educational policy makers, geographical and educational theorists and professional educators. Ballantyne and Gerber (2004) summarised these trends chronologically from top to bottom in Figure 2

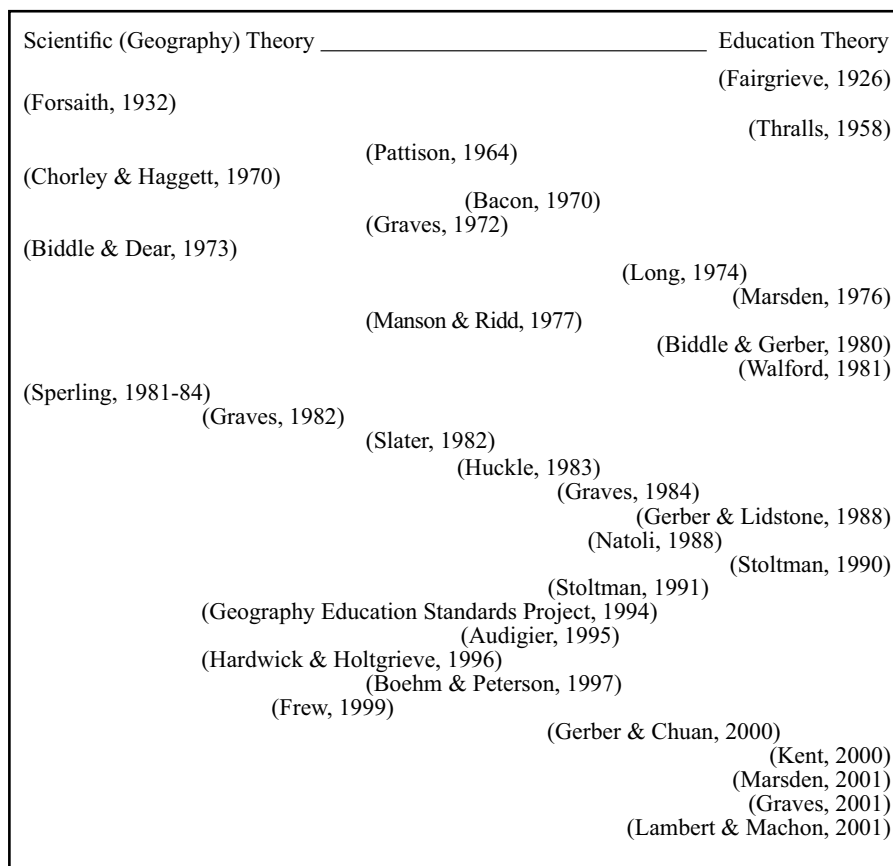


Figure 1. Geography Education Trends in Scientific and Educational Theory as Reflected in Selected Publications (Stoltman & De Chano, 2003).

and they also identified a recent, fifth trend that they labelled “free-choice learning environments”.

There has been a growing interest in pedagogy in education at the level of policy, practice and research. Watkins and Mortimore (1999) define pedagogy as “any conscious activity by one person designed to enhance learning in another” and emphasise the importance of the relationship between teaching and learning. What is certain is that the process of learning is complex – see Lambert and Balderstone’s (2000) diagram (Figure 3) of a model of learning in school and learning styles (Figure 4) which nowadays are increasingly acknowledged. All such attempts to conceptualise the learning and teaching process are probably underpinned by three broad theories of the main ways in which children learn (Figure 5).

<p>Nature of Geography and its Educational Potential</p>	<ul style="list-style-type: none"> • Geography as the link between the physical and human sciences • Teaching key fact and concepts • Method of spatial study based on observation, recording and analysis • Focus on teaching about the character of places, similarity & differences, environmental systems • Geography methods textbooks from universities emphasised teaching through fieldwork, local and sample studies • Little concern for rationale/principles for different teaching methods • Range of materials, e.g. maps and atlases, and AV aids
<p>Geography as a Medium for Education</p>	<ul style="list-style-type: none"> • Using the key questions of geographical enquiry What? Where? How? Why? What impact? How ought? • Teaching key concepts • Learning experiences in Classrooms or Libraries Field and Community locations • Enquiry learning to develop knowledge, skills and values • Use of various perspectives for teaching, e.g. critical, developmental, multicultural • Teaching and learning through a large range of strategies • Teacher as action researcher • Teaching exemplars through large curriculum projects led from universities, e.g. Geography 16-19, Geography 14-18, HSGP
<p>Learning Focus</p>	<ul style="list-style-type: none"> • Focus on the learning process as applied to geography • Learner negotiation and decision making • Teacher as facilitator of student learning through Problem Solving Conflict Resolution Spatial Planning • Importance of collegial, cooperative learning based on teams or groups • Developing learner abilities through stimulating and challenging geography lessons • Intentional learning behaviours
<p>Focus on Pedagogy and Knowledge Management</p>	<ul style="list-style-type: none"> • Broad repertoire of teaching styles and strategies • Artistry in successful geography teaching • Knowledge creation and team work • Knowledge and Information Networks • Managing Communities of Practice • Linking knowledge management to tasks and purposes • Creating a knowledge-sharing culture • Promoting knowledge transfer through teaching and learning geography

Figure 2. Trends in Teaching and Learning Geography in Schools since the 1960s (Ballantyne & Gerber, 2004).

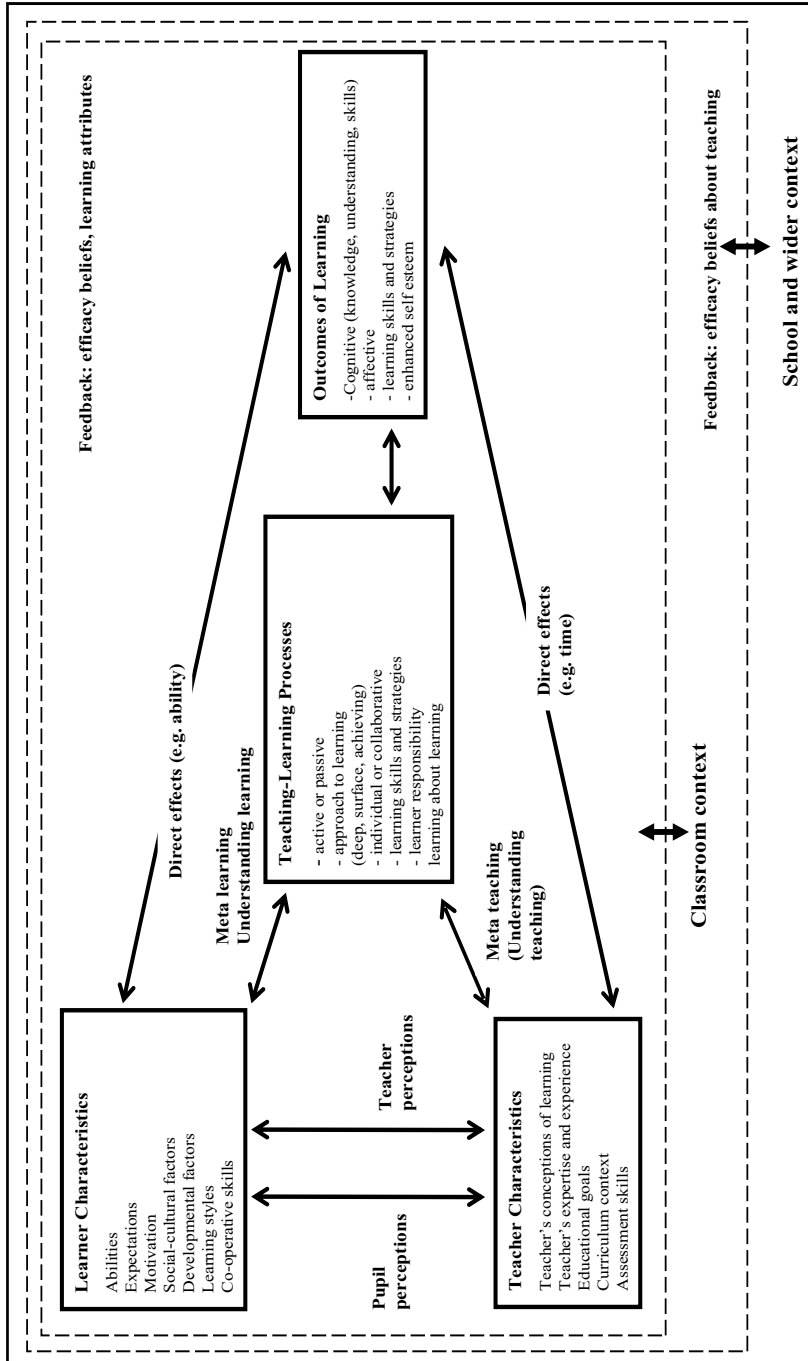


Figure 3. A model of learning in school (Lambert & Balderstone, 2000).

<p style="text-align: center;">ACCOMMODATORS (DYNAMIC LEARNERS)</p> <ul style="list-style-type: none"> • independent and creative • likes taking risks and change • enjoys and adapts well to new situations • curious and investigative • inventive, experiments • shows initiative • problem solvers • involves other people • gets others' opinions, feelings • can be impulsive, 'rushes in' • uses 'trial and error' and gut reaction • relies on support network 	<p style="text-align: center;">DIVERGERS (IMAGINATIVE LEARNERS)</p> <ul style="list-style-type: none"> • imaginative and creative • flexible, sees lots of alternatives • colourful (uses fantasy) • uses insight • good at imagining oneself in new/different situations • unhurried, casual and friendly • avoids conflict • listens to others and shares ideas with a small number of people • uses all senses to interpret • listens, observes, asks questions • sensitive and emotional, deep feelings • cannot be rushed until ready
<p style="text-align: center;">CONVERGERS (COMMON-SENSE LEARNERS)</p> <ul style="list-style-type: none"> • organised, ordered and structured • practical, 'hands-on' • detailed and accurate • applies ideas to solving problems • learns by testing out new situations and assessing the result • makes theories useful • uses reasoning to meet goals • has good detective skills, 'search and solve' • likes to be in control of the situation • acts independently then gets feedback • uses factual data and theories 	<p style="text-align: center;">ASSIMILATORS (ANALYTIC LEARNERS)</p> <ul style="list-style-type: none"> • logical and structured • intellectual, academic • enjoys reading and researching • evaluative, good synthesiser • thinker and debater • precise, thorough, careful • organised, likes to follow a plan • likes to place experience in a theoretical context • looks for past experiences from which to extract learning • reacts slowly and wants facts • calculates probabilities • avoids becoming over-emotional • often analyses experience by writing it down

Figure 4. Descriptions of learning styles (Lambert & Balderstone, 2000).

Cognitive Developmental Theory (CD)	Social Constructivist Theory (SC)	Information-Processing Theory (IP)
All children pass through a series of stages before they construct the ability to perceive, reason and understand in mature, rational terms.	Share some important areas of agreement with Piagetian theory, particularly activity as the basis for learning and for the development of thinking.	Develops elements of CD (sequences, activity) and SC theory (experience) but emphasizes cognitive strategies rather than structures.
Central Aspects		
1. Children’s thinking is different in kind from that of more mature individuals.	1. Relationships between talking and thinking.	1. Fundamental processes and strategies underlie all cognitive activity.
2. All children develop through the same sequence of stages before achieving mature rational thought.	2. Role of communication, social interaction and instruction in scaffolding thinking and cognitive development is crucial.	2. Brain’s systematic processes of perception, memory and problem-solving process information in the short-term memory and store it as abstractions in the long-term memory.
3. Structures of children’s thinking at each stage are distinctive, i.e. the same for all children at the same stage and differ from the children and adults at other stages.	3. Learning involves search for patterns, regularities and predictability (Bruner).	3. Processes are the same for all individuals but speed and efficiency vary from learner to learner.
4. Development is not a continuous accumulation of things learnt step by step but ‘intellectual’ revolutions are marked by a change in structure of intelligence.	4. ‘Zone of proximal development’ (Vygotsky) is the gap that exists for an individual between what she can do on her own and what she can achieve with help from a more knowledgeable or skilled person.	4. Cognitive development is the process of learning more and more helpful strategies of analysing, remembering and problem solving.
5. Active, experimental learning encouraged.	5. ‘Guided discovery’ learning is encouraged.	5. Concrete examples and experiences are important in developing abstractions. Instruction important in strategy development

Figure 5. Ways Children Learn (Butt, 2002).

LEARNING AND TEACHING IN CLASSROOMS

In the early days of the Geography 16–19 Project (1987), of which I was Associate Director, I conducted a major, nationwide (for England and Wales) teachers' questionnaire survey. 191 teachers were surveyed as part of a random stratified sample of establishments teaching Advanced level (the pre-university examination taken in England and Wales at the end of two years of study by students in the 16–19 age group) geography. A clear picture emerged of the most commonly used teaching methods including

- The teacher talks and students respond;
- The teacher talks, students respond and make notes;
- The teacher talks, uses blackboard and students make notes; and
- Students write an essay with the help of books and/or notes.

Equally clear were the rarely used teaching methods

- The teacher organises group discussions;
- The students organise a whole class discussion; the teacher joins in;
- The students organise group discussion; the teacher joins in;
- The students prepare and distribute sets of notes for each other;
- The teacher sets small group assignments (written) in class (e.g. reports of group discussions);
- The teacher sets students an open ended enquiry (i.e. students makes decisions, teacher advises, end result not known);
- The teacher involves pupils in a geographical classroom game;
- The teacher involves students in a role play;
- The teacher involves students in a simulation;
- Students make use of film/tape/slides/TV for personal research;
- The teacher organises an outside speaker to give a lecture; and
- The teacher organises an outside speaker for question/answer sessions.

The findings seemed to support Flanders' rule (1970) of two-thirds. This rule, that emerged from the studies Flanders conducted in which he used an elaborate observation schedule to monitor the behaviours of pupils and teachers in classrooms, postulated

- Two thirds of all lessons observed was talk;
- Two thirds of that talk was by the teacher; and
- Two thirds of that teachers' talk was lecture.

The Geography 16–19 Project attempted to change both pedagogy and content of post-16 courses. Postman and Weingartner suggest (1971) that the enquiry teacher displays the following behaviours and that was a key mission for the project.

- Rarely tells students what he (*sic*) thinks they ought to know;
- Is largely interested in helping students learn to learn;
- Stresses, by example, that education is a process of finding answers;
- Uses questioning as the basic mode of discourse with students;

- Encourages openness to alternative perspectives and rarely accepts a single viewpoint as an answer to an enquiry;
- Encourages student-student interaction as opposed to student-teacher interaction; and
- Develops lessons from the interests and responses of students and not from a previously determined plan for the way the enquiry should proceed.

I wonder how successful the 16–19 Project was in changing teaching methods? A research project is overdue but one fears rhetoric is stronger than reality. Gerber's table (Table 1) suggests that, across the world, lecturing, map reading, individual and group work are common whereas games and simulations and experiments less so.

The political and educational rhetoric around the world suggests that enquiry is pervasive in geography classrooms. There are certain problems with this. Firstly there are many interpretations of the word "enquiry" and it is not commonly understood. Secondly there is a danger that the problems/questions/issues that "drive" enquiry dominate rather than the necessary underpinnings of relevant, systematic geography. My preference is for a wide and inclusive definition of enquiry. I firmly agree with Roberts (2003) who has produced an authoritative book on *Learning Through Enquiry*. "If geography is to be worth learning, then geographical enquiry should help students make sense of the world they live in and to make sense of what they hear, see and read about the world in their everyday lives; geography should help them make sense of their different personal worlds ... geographical enquiry should be focused on real issues, on place and spaces that mean something to students and on real data of the kind that students are likely to encounter in the world outside the classroom" (2003, p. 6).

Table 1. Teaching methods used in geographical education in 32 countries (Gerber, 2001).

Teaching method	Not at all	Weak	Moderate	Strong	Very strong
Fieldwork	1	12	19	9	2
Games/simulations	24	13	4	4	0
Lectures	0	3	7	14	19
Experiments	5	18	18	2	0
Statistics	1	5	27	8	2
Inquiries/decision-making	2	8	21	8	4
Map reading	0	2	14	16	11
Map making	4	13	21	5	0
Mental mapping	4	15	20	2	1
Individual work	0	2	14	21	6
Group work	0	6	20	11	6

The planning model which encapsulates enquiry is the Geography 16–19 Project’s “Route for Enquiry” incorporating geography’s key questions and allowing schemes of work or indeed individual lessons to be structured (Figure 6).

A relatively recent aspect of learning and teaching in classrooms is the idea of “teaching thinking” which research has shown to be strongly associated with positive

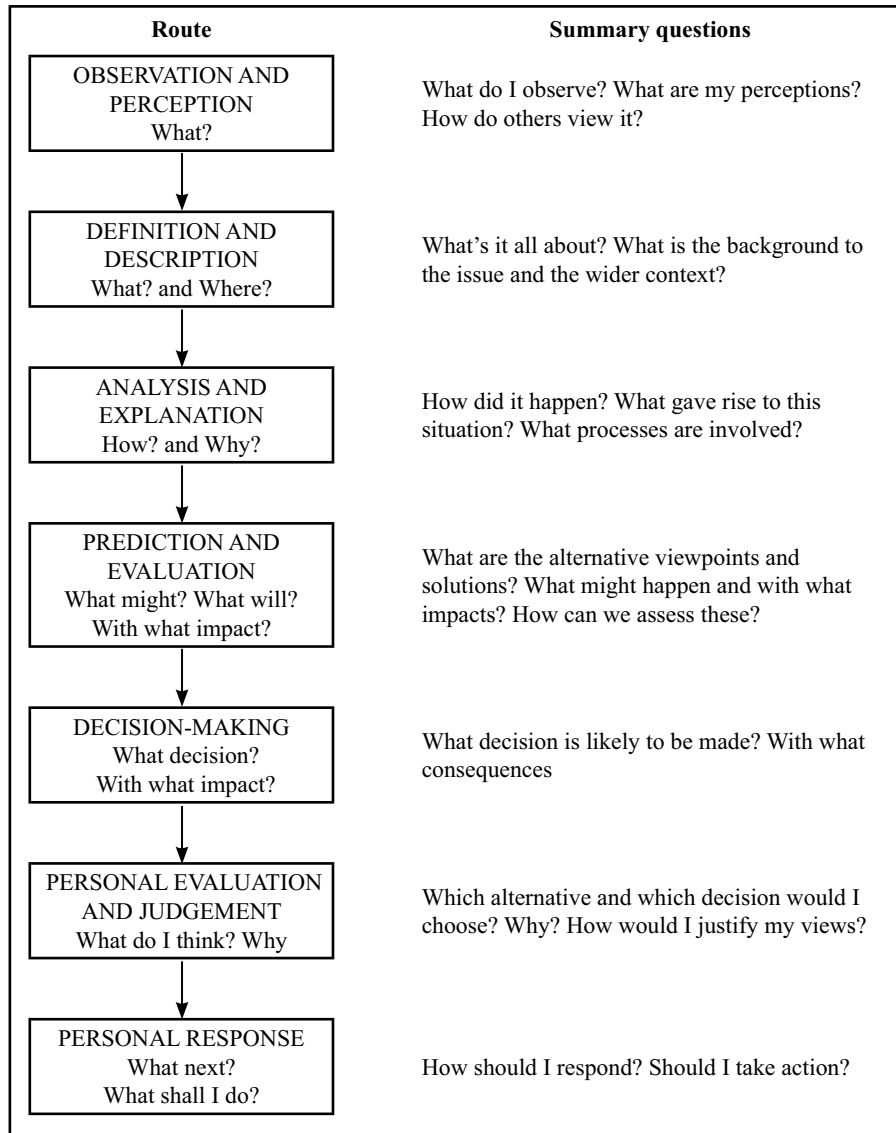


Figure 6. The route for enquiry and enquiry questions (Naish, Rawling & Hart, 1987).

learning outcomes. Leat in England (1998) with a group of geography teachers has trialled a number of innovative teaching materials designed to accelerate the conceptual learning of students based upon constructivist learning theories. Central to this process is a focus on how students learn rather than how teachers teach with geography being seen as a vehicle for learning. Examples of related teaching materials include mysteries, living graphs, mind movies, odd one out and storytelling.

Stage of teaching and learning	Closed	Framed	Negotiated
Questions	Questions not explicit or questions remain the teacher's questions	Questions explicit, activities planned to make pupils ask questions	Pupils decide what they want to investigate under guidance from teacher
Data	Data selected by teacher, presented as authoritative, not to be challenged	Variety of data selected by teacher, presented as evidence to be interpreted	Pupils are helped to find their own data from sources in and out of school
Interpretation	Teacher decides what is to be done with data, pupils follow instructions	Methods of interpretation are open to discussion and choice	Pupils choose methods of analysis and interpretation in consultation with teacher
Conclusions	Key ideas presented, generalisations are predicted, not open to debate	Pupils reach conclusions from data, different interpretations are expected	Pupils reach own conclusions and evaluate them
Summary	The teacher controls the knowledge by making all decisions about data, activities, conclusions. Pupils are not expected to challenge what is presented	The teacher inducts pupils into ways in which geographical knowledge is constructed, so that they are enabled to use these ways to construct knowledge themselves. Pupils are made aware of choices and are encouraged to be critical	Pupils are enabled by the teacher to investigate questions of concern and interest to themselves

Figure 7. A Framework for styles of teaching and learning (Roberts, 1996).

Probably the most helpful overview model for looking at broad styles of teaching and learning is that devised by Roberts (Figure 7) based on earlier work by Barnes (Barnes et al., 1987).

My final observation about learning and teaching in classrooms is that geography teachers nowadays have a wonderful armoury of teaching strategies and resources from which to choose, including a bewildering variety of textbooks, the importance of which has been considered by a number of writers including Lidstone, 1985, Graves, 2000, and Marsden 2001. The precise contribution of textbooks and atlases to curricula varies hugely from country to country, and there is a substantial body of evidence of research into the use of geography textbooks in the publication of the Georg-Eckert Institute in Braunschweig, especially articles in their journal *Internationale Schulbuchforschung*.

LEARNING AND TEACHING IN THE FIELD

The fieldwork tradition, shared with such subjects in the secondary school curriculum as biology, history and environmental education, is everywhere under threat within the school curriculum and to an extent is under threat for a variety of reasons including cost, staff time and expertise, risk and congested curricula. “Geography without fieldwork is like science without experiments the ‘field’ is the geographic laboratory where young people experience at first hand landscapes, places, people and issues, and where they can learn and practice geographical skills in a real environment. Above all, fieldwork is enjoyable” (Bland et al., 1996, p. 165).

In a way fieldwork developments over time have been a microcosm of changing teaching strategies in geography education as a whole, Job (1999) (Figure 8). Each has gone through the regional/descriptive-didactic; spatial-scientific; issues-oriented approaches with the beginnings of an appearance of more critical value-laden geographies. Some of the latest innovations are sensory approaches, links made to sustainable development and forms of virtual fieldwork. One such innovation is the application in geographical education of Gardner’s theory of multiple intelligences (Gardner, 1999) which Gilbert (for website, see references) has done for new environments. Gilbert argues that “once you have tried this powerful way of thinking about the world around you, life will never be the same again – you will have learned how to look and think *deeply*”.

As Foskett (1999, p. 159) argues “the position of fieldwork in the geography curriculum is highly variable”. Apart from the UK and Australia and New Zealand “the importance of fieldwork in the curriculum is much less well-established. In the USA, geography fieldwork has largely been ignored in curriculum development, and in many states in Europe the role of fieldwork has been marginal. In most less-developed countries, resource constraints have meant fieldwork development has been a very low priority”. If we are to argue for its inclusion in the curriculum we must be able to demonstrate its real educational value. There are three elements of such evidence. Firstly the evidence of experience – the observations of individual teachers

Strategy	Purposes	Characteristic activities
The traditional field excursion	<ul style="list-style-type: none"> • Developing skills in geographical recording and interpretation • Showing relationships between physical and human landscape features • Developing concept of landscape evolving over time • Developing an appreciation of landscape and nurturing a sense of place 	Students guided through a landscape by teacher with local knowledge, often following a route on a large scale map. Sites grid-referenced and described with aid of landscape sketches and sketch maps to explore the underlying geology, topographical features, the mantle of soil and vegetation and the landscape history in terms of human activity. Students listen, record and answer questions concerning possible interpretations of the landscape.
Field research based on hypothesis testing	<ul style="list-style-type: none"> • Applying geographical theory or generalised models to real world situations • Generating and applying hypotheses based on theory to be tested through collections of appropriate field data • Developing skills in analysing data using statistical methods in order to test field situations against geographical theory 	The conventional deductive approach involves initial consideration of geographical theory, leading to the formulation of hypotheses which are then tested against field situations through the collection of quantitative data and testing against expected patterns and relationships. More flexible variants of this approach encourage students to develop their own hypotheses based on initial field observations, thereby incorporating an inductive element
Geographical enquiry	<ul style="list-style-type: none"> • Encouraging students to identify, construct and ask geographical questions • Enabling students to identify and gather relevant information to answer geographical questions and offer explanations and interpretations of their findings • Enabling students to apply their findings to the wider world and personal decisions 	A geographical question, issue or problem is identified, ideally from student's own experiences in the field. Students are then supported in the gathering of appropriate data (quantitative or qualitative) to answer their key question. Findings are evaluated and the implications applied to the wider world and personal decisions where appropriate.
Discovery fieldwork	<ul style="list-style-type: none"> • Allowing students to discover their own interests in a landscape (rather than through a teacher) • Allowing students to develop their own focus of study and methods of investigation • Encouraging self-confidence and self-motivation by putting students in control of their learning 	Teacher assumes the role of animateur, allowing the group to follow its own route through the landscape. When students ask questions these are countered with further questions to encourage deeper thinking. A discussion and recording session then identifies themes for further investigation in small groups. This further work has arisen from students' perceptions and preferences rather than those of teachers.
Sensory fieldwork	<ul style="list-style-type: none"> • Encouraging new sensitivities to environments through using all the senses • Nurturing caring attitudes to nature and empathy with other people through emotional engagement • Acknowledging that sensory experience is as valid as intellectual activity in understanding our surroundings 	Structured activities designed to stimulate the senses in order to promote awareness of environments. Sensory walks, use of blindfolds, sound maps, poetry and artwork are characteristic activities. Can be used as an introductory activity prior to more conventional investigative work or to develop a sense of place, aesthetic appreciation or critical appraisal of environmental change.

Figure 8. Fieldwork strategies and purposes (Job, 1999).

and the accumulated evidence from inspection systems. Secondly the evidence from educational psychology supports the notion that experiential learning enhances pupil learning outcomes. Thirdly, research into the fieldwork process itself, although not extensive, supports the idea of cognitive and affective gain (Kent & Foskett, 2000; Munowenyu, 2002; and Nundy, 1998).

THE ROLE OF NEW TECHNOLOGIES

The pace of change in the use of the new technologies in education has been remarkable and virtually impossible to have predicted. In 1980 I attended an MA seminar given at the University of London Institute of Education by Watson who spoke of computer assisted learning in school geography and outlined the new and enormous potential of microcomputers for education. I had one of those “Eureka” moments but my vision and aspirations were as nothing compared with the present nature of the new technologies. Indeed Stoltman and De Chano (2003) argue that “change within geography education will focus largely on the application of new technologies, such as geographic information systems (GIS) and electronic communications, to search database and process the information in useful ways” (p. 134).

A combination of remote sensing, GIS and the web has the potential to transform geography education. Ally to that the role of e-learning for students and teacher groups using virtual learning environment one is speaking of a revolution in practice although predictions of ICT geography futures are not straightforward (Kent, 2003). Some of the most imaginative and “at the frontiers” development work has been financed by the European Commission. Examples such as Eurogame, YougNet and DUNES are large scale European research and development projects involving partners in several countries and are exciting examples of online cooperative learning between children from different cultural and national backgrounds (see websites).

However the uptake is still patchy. Gerber’s (2001) international research showed that satellite images, computer software and GIS were not pervasive in geography classrooms. Key constraints appear to be the unequal access to hardware and software, yet probably of greatest importance is the availability of trained teachers. More research needs to focus on the use of ICT in education – so far there has been an unspoken assumption that it is good, worthwhile and effective.

Fortunately the geography education community has become actively engaged in research and development into the new technologies. So, in 2000 in Seoul, at the IGU Commission on Geography Education meeting, fifteen per cent of papers were ICT oriented whereas at the equivalent meeting in Glasgow in 2004 nearly twenty-five per cent of papers were so focused.

CONCLUSION

Experience suggests that all curriculum change is difficult, slow and sometimes tortuous but the end product is exciting and ultimately better for both students and

teachers. Successful curriculum development requires a number of conditions. These include most importantly allowing teachers ownership and opportunity for flexible use of the curriculum; adequate professional development and support networks; an assessment system that encourages such curriculum change; a balance between breadth and depth of content; systematic geography must underpin issues based curricula; and resources should be wide ranging. However it is acknowledged that the precise way in which these ideals are implemented may vary across countries. For example in a number of countries the syllabus is specified in detailed by governmental agencies and the textbooks are either commissioned or approved by the same agencies. In such situations, teachers may lose their jobs if they fail to teach tightly to the textbook and it becomes the responsibility of curriculum designers and text book writers to ensure that teachers are given as much freedom as possible to exercise their professional judgement.

With these prerequisites in place, teachers' key reward "is to prepare students who apply a geographic perspective to recognising, analysing and resolving the local and global issues and problems they face as responsible citizens" (Stoltman & De Chano, 2003, p. 134).

Perhaps to end I couldn't do better than repeat the words of Nicolina Georgieva from Romania. Nicolina was the recent winner of the first international poster competition associated with the IGU Commission on Geographical Education. Children were asked to describe their life, locality and country through a poster – their windows on the world! Nicolina won and was invited, with her mother, to receive her award at the 2004 International Congress in Glasgow. She won us all over with her intelligence, maturity and enthusiasm for geography at 13 years old! At the award ceremony she gave a thank you speech and concluded, "I am sure senior geographers will help us to navigate better in the world of geography. It is so interesting, let's learn and have fun together". "Fun" and "learning" could well be the capstones of any new geography course so that all our students leave us with the sort of passion Nicolina demonstrated for the subject in Glasgow.

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PHILIP STIMPSON

CHANGING ASSESSMENT

INTRODUCTION

Assessing students' progress lies at the heart of the educational process. In reality, there is considerable variation in time, space and emphasis. At some times and in some places great effort is being expended in trying to put assessment at the heart of learning, at other times and in other places the core purpose is in certification and selection. Assessment, content and pedagogy are socio-politico-cultural responses to the forces that shape society, education and schooling. Whilst some social forces acting on assessment are global and engender global trends, other forces are national or even sub-national with local responses or adaptations. The ways that it is changing and the varying extents to which it is changing in different education systems is a central focus for this chapter which sets out some of the changes that are taking place.

A major aim of developments in the assessment of learning in geography has been, first, to make assessment an integral part of the teaching and learning process and, secondly, to diversify examinations so they continue to provide evidence of achievement but in doing so do not constrain learning. It is commonplace to talk of "curriculum" and "assessment" as separate entities. However, if one views curriculum, and there are diverse views, as the expression of the experiences presented to people studying geography (rather than just a statement of intended content) then assessment is a part of the curriculum. Assessment is to be seen as a tool for the geography curriculum and an integral part of the geography education experience.

To function in this way, assessment practices must validly and reliably represent those aspects of the young geographer's achievements that are educationally significant. They are concerned with "... all the processes and products which describe the nature and extent of learning and its degree of correspondence with the aims and objectives of teaching and its relationship with the environments that are designed to facilitate learning" (Satterly 1989, p. 3). Or, as Rowntree (1987) contends, assessment is "to know a person" (p. 1). Assessment is much more a holistic concern than a mere test of say spatial impacts of global warming where evidence of the acquisition of such knowledge might initially suggest. In technical terms it is the distinction between simple content validity and deeper construct validity.

In effect the aim is for a closer match between educational aims – that is, knowledge, skills, attitudes and dispositions – and the methods and processes of assessment. This way there is improved understanding of what students have learned at the end of a course of study, be it a week, a term or a year. There is improved learning as students

and teachers come better to know what the learner can do and needs to do to progress. This combination is what has become known as educational or curriculum-integrated assessment. It is concerned with the assessment in geography being the helpful servant rather than the dominating master. It marks a move away from a simple psychometric measurement model. As Gipps (1994) argued, “Assessment is undergoing a paradigm shift from psychometrics to a broader model of educational assessment, from a testing and examinations culture to an assessment culture” (p. 1).

CHANGING CONTEXT, CHANGING PRACTICE

We shall go where we are going in assessing geographical understanding because of what we do today, our evaluation of past practices, both in our own educational environment and what we interpret of others’, and our vision of future scenarios. We are therefore where we are today and moving on a particular trajectory partly because of what happened in the past. However, attempting to track changes is problematic. Leaving aside unrecorded aspects of assessment that occur on a day-by-day basis in the classroom, evidence of assessment in geography is piecemeal.

Daugherty (1990) offered a review of assessment in the geography curriculum in England and Wales and saw the 1960s as a watershed contrasting assessment between 1880 and 1960 with that which followed. For reasons that will become clear, this seems a very credible dividing line for England and Wales and, it is important to stress, its socio-economic and political context. Prior to the 1960s, one can argue that

- There was limited concern by those teaching geography in the classroom with assessment. The teacher’s role was in determining what to teach and how (Daugherty, 1990).
- Assessment was the concern of the public examination boards and teachers’ interests largely only went as far as the best preparation of their students for those tests. Assessments in the schools mirrored that of the public examination boards during the period and were conducted through formal pen and paper written tests, a feature not confined to the UK and certainly apparent in Hong Kong and countries within the British Commonwealth. The key role of public examination boards was highlighted in books on teaching geography at the time. The incorporated Association of Assistant Masters in Secondary Schools (1939) devoted a chapter to public examinations. Although it contained the caveat that there were potential negative effects from public examinations, it concluded that these assessments were necessary. There was implicit acceptance of the dominating role of examination boards in what was to be learnt and how it needed to be tested, a point emphasised by Cons and Honeybone (1960).
- There were expressions of concern about the validity of examinations, that is, whether they were measuring (note that the model was psychometric) what they were supposed to measure (Daugherty, 1990) but these did not seem to represent a groundswell for change. Graves (1975) noted the reluctance of examinations

boards to change because they felt teachers would not be in sympathy. The “evil necessity” and inertia of current practice was accepted.

- Until the latter years of the period, with the introduction of mapwork into formal examinations, the focus was largely cognitive emphasising the reproduction of understandings of conceptual and locational knowledge. The tasks, of course, have in part to be viewed in terms of the geographical paradigms in physical features and regional geography current at the time. Students were asked to “explain using examples ...” or to “compare and contrast” based primarily on their recalled understandings. Jay (1981) notes such questions from the Cambridge Junior Local Certificate and the Oxford Senior Local Certificate in 1884, the same focus being still apparent in an examination question from a well-known school in 1922 and in a Northern Universities Joint Board examination in 1960 (Daugherty, 1990).
- The mode of assessment was consistent with the largely cognitive/reproductive aims, largely through formal, pen and paper tests at the end of courses of study with intermediary tests mirroring those of public examinations in preparation, a practice that percolated down through the school into non-examination classes.
- Assessment was focussed on discriminating the high achievers. The aim was to identify the best and the underlying process was norm referenced as students were ranked.

Educational opportunity in general prior to the second half of the twentieth century was constrained. For the bulk of children there was basic elementary education that ensured literacy and numeracy in the population to a greater or lesser extent. The needs of the economy were largely for skilled and semi-skilled workers initially in agriculture and then in manufacturing. The voices of egalitarianism were only gradually coming to the fore. The need for both an intellectual elite in government, academia and other institutions and for well-read, world-aware people was small. Social Darwinism by which the fittest survived and were nurtured abounded. It was not surprising therefore that assessment in geography, as in other disciplines, was focused upon reliable selection.

What was it in England and Wales during the 1960s that led to change going beyond the rhetoric of the critical few and to a view of assessment as “A failing system” (Lambert, 1996)? For Daugherty (1990), the change came from the raising of the school leaving age (ROSLA) to age 15 and then 16 years. In reality this was indicative of a wider phenomenon reflecting a social change that was finally being realised. Schooling was now about education for all young people and that meant all abilities, capacities and dispositions to learning and life. The inescapable could no longer be avoided that rates of learning and readiness to learn were not equal. Diversity in the student body required equal diversity in the curriculum and in the way that content was assessed.

Lurking in the background in the idealistic days of 1960s Britain was a desire for a new sort of worker for a future no longer dominated by manufacturing but by what has now become known as the “knowledge society”. New capabilities were needed. Thinking through problems, handling information, applying knowledge to

new situations, communicating findings and working collaboratively became the capacities that were required and to which education was expected to respond.

The geography curriculum and assessment as a part of this had to change. The key point to be made is that assessment within geography in the England and Wales changed as much because of the changing socio-economic and political imperatives as because of new thinking about assessment in general. The two operated symbiotically. Other education systems faced similar societal changes to a greater or lesser degree and have changed their curricula, the way they look at geography and how they assess to greater or lesser degrees. Assessment practices in geography must be viewed in context.

GENERAL TRENDS IN ASSESSMENT

Despite the caveat of the last section, it is possible to distinguish twenty changes that, to a greater or lesser degree, are starting to become apparent in various education systems around the world to varying degrees. They encompass a shift away

1. from a narrow view of assessment focused on the reliable selection of the most able with assessment equated with formal tests and examinations *to* a broader multipurpose view assessment linked to the curriculum, the uses people make of evidence of student learning and in particular the benefits to student learning and progression from integrating assessment within teaching;
2. from unidimensional assessments *to* ones that are multidimensional with a broader view of assessment;
3. from assessment objectives that are implicit within general statements of intended learning *to* making assessment objectives and outcomes explicit and more precise;
4. from solely emphasising the recall of concepts and examples (“knowing that”) *to* increasingly an emphasis on skills such as problem solving and the application of knowledge (“knowing how”) and on values (“how ought”);
5. from assessing solely convergent, lower order thinking that may encourage “surface learning” *to* a focus that includes and requires divergent, higher order, creative thinking and “deep learning”;
6. from just emphasising academic achievement *to* the inclusion of generic capacities such as communication, social and working capability;
7. from use of a narrow range of techniques (the essay, short answer questions or multiple choice questions) *to* a more diversified set of techniques that in addition may include observation, peer and self assessment, portfolios and projects, and in doing so increase the validity and reliability of assessment (Marsden, 1976);
8. from the idea of assessment as something “done to a student” *to* something that intimately involves the student in self or peer assessment;
9. from assessment as a purely individual student activity *to* inclusion, in addition, of the assessment of students as a group activity;

10. from a prioritisation of formal, summative, terminal (end of course) or semi-terminal “tests” as the shared meaning to one that involves assessment which is formal and informal, terminal and ongoing, summative and formative, etc., as required by the needs and purposes for evidence of learning;
11. from assessment in contrived, artificial situations *to* assessment that is authentic and situated in the future lives of young people and the questions and problems they may face;
12. from assessment as a self-contained activity and a dominating master when it comes to learning *to* one, as a helpful servant, which is integrated within student learning and development;
13. from an over-emphasis on summative assessment to moves *to* balance this with a formative dimension and recognition of the crucial role played by feedback in learning;
14. from an over-riding concern with assessment as a means of comparing and ranking children within a norm-referenced framework *to* an increasing interest in assessment as a means of showing what children can do, the standard they have achieved, either in respect to national or personal criteria, and in supporting and encouraging their learning within a constructivist perspective;
15. from a reliance on just reporting marks (quantitative assessment) *to* a recognition of the benefits of qualitative description, that is, understanding the extent of knowledge or ability that provide a fuller description of student achievement;
16. from an over-riding concern with reliability *to* an increasing concern with validity issues, fitness for purpose and the necessary level of reliability for optimal validity;
17. from blind acceptance of the accuracy of tests *to* an awareness of the bias in content and methods employed;
18. from the over-riding threat of high stakes assessment *towards* balancing, as far as possible, with lower stake arrangement;
19. from reliance on terminal, end of course assessment *to* the additional or total use of coursework; and
20. from acceptance that responsibility for assessment rests solely with external agencies *to* acceptance that schools, and in particular the classroom teachers within them, have a key role to play in marking, and sometimes setting, public examination questions.

In sum these represent moves to improve evidence of student achievement, to mitigate the dominance of end of course summative assessment, to a greater match with content objects and to harness positive rather than negative backwash effects on learning.

IMPROVING EVIDENCE OF ACHIEVEMENT

The function of assessment is to provide information on student achievement but the purpose for this activity is varied. Information is required by teachers to evaluate and

direct teaching, by students to motivate and support their learning, by school managers and educational agencies to monitor teachers and schools, and by employers and other end users to advise selection. The better the information provided on achievement, the better can stakeholders use the information. All this assumes clear understanding by all parties of what it was intended to be learned. The search for definition led to criterion referencing. However, “classic” criterion referencing of the type proposed in the 1960s is too restrictive and narrow for general geographical education. Consequently in the late 1970s–early 1980s a concept of standards based assessment started to surface alongside standards based curricula. Standards were broadly focused statements of what was to be achieved. They crossed the Atlantic and in the UK were embraced implicitly in the Geography for the Young School Leaver project and later in the National Curriculum where a nomenclature of “targets” was used. In Australia similar initiatives were to be found.

A concern with outcomes was the natural consequence in the educational climate that persisted. Expected outcomes related to standards as the observable criteria in terms of capacities and actions that are demonstrated in meeting a specified standard. Today outcomes based standards or target related assessment schemes with associated rubric of levels of performance are to be found in, or being developed in, a number of educational systems, for example, in South Africa (Le Grange & Beets, 2005) and soon in Hong Kong.

The implementation of standards based assessment in geography is, however, not without attendant tensions. Standards may go some way to equalising provision of quality education across an education system but, if adopted unthinkingly, may run the risk of failing to address diversity of student interests. Indeed it may encourage teaching to the test in a “one size fits all” curriculum particularly where there is high stakes national testing. Thus, the Qualifications and Curriculum Authority in England has noted how “pressures from senior managers are resulting in the inappropriate use of level descriptors for benchmarking, frequent reporting to parents and target setting” (QCA, 2002, p. 4).

One may argue that abuse is not a problem of standards *per se* but of implementation. However, on the other hand, they may be seen as an artefact of a managerialist, instrumental, performance-driven, achievement culture. As Fielding (2000) notes, it is the idolatry of measurement and accountability wherein the problem lies. Geographical literacy goes beyond isolated targets but is an expression of a perspective in which the whole is more than the sum of the parts. Yet, in search of specification, it is all too easy to lose sight of the goal. The New South Wales curriculum laudably seeks students to develop among other things an understanding of the contribution of a geographical perspective and skills to investigate geographically and communicate geographically (BOSNSW, 2003). The contribution of a geographical perspective, for example, is then conceptualised in four expected outcomes analyses changing demographic patterns and processes (P4), examines the geographical nature of global challenges confronting humanity (P5), identifies the vocational relevance of a geographical perspective (P6), and formulates a plan for active geographical enquiry. All are, possibly, acceptable but none even if taken together are sufficient to demonstrate the standard, one might

argue. Schools understandably want clear definition but this may give rise to the risk that where standards go beyond the broad foci there is potential loss.

To argue that there should not be clear statements of intent is untenable. Concern arises when specifications become too restrictive, narrowly interpreted and, in search for reliability, narrowly assessed ignoring descriptive but looser assessment methods that would provide a richer understanding of achievement. If standards push geography away from the appropriate use of alternative assessment methods such as portfolios, oral assessment or peer assessment, then they will have done geography a disservice in the long term in the interest of short-term accountability. As flexible servants of learning and achievement, they are valuable but raise questions about the sorts of assessment that should take place. These are considered in the next two sections under the banners of Summative Assessment and Formative Assessment.

SUMMATIVE ASSESSMENT IN GEOGRAPHY

The main challenge for summative assessment, or “assessment that provides a statement of what a student knows, understands or can do” (Butt, 2000, p. 18) that is, so called assessment *of* learning, is to create tasks that demonstrate a close match with curriculum objectives while simultaneously maintaining the necessary degree of accuracy or reliability. This is particular crucial for summative public examinations that in reality generally define the learned curriculum and, as argued earlier, the style and assessment culture throughout a school. If such examinations only appraise a restricted part of the intended curriculum because of difficulties in developing accurate measurement, objectives are likely to be missed and geographical education narrowed.

Where results of summative assessments are used for selection (rejection?), there is rightfully a demand that, in the search for fairness and equity, there is transparent accuracy. Assessment tasks that put reliability at risk in such high-stakes circumstances are rejected and the tendency is to concentrate on a narrow range of methods such as multiple choice tests, short answer questions and essays that are relatively closed in nature and require minimal or no judgement. In short, they are safe. Enquiry, knowledge application and problem solving in authentic situations along with tasks that involve, in particular, assessing process are in contrast seen as risky. While the UK’s Geography 16–19 Advanced Level and the Hong Kong Advanced level Geography examinations, for example, attempt to address this through a relatively neutral values analysis approach, the incorporation of values dimensions has been seen as problematic in many high stakes summative examinations. “A certain scepticism regarding the assessment of attitudes is understandable for they are relatively intangible and difficult to evaluate” (Marsden, 195, p. 115). Can giving marks for one disposition rather than another be justified *per se* and particularly where a mark added or deducted may lead to selection or rejection?

The more limited are the future career and educational opportunities for students in schools, the more crucial are issues of fairness and reliability and the greater the

tendency towards formal pen and paper tests. The use of what has become known, particularly in the USA, as alternative assessments such as data-based enquiry tasks, problem solving exercises and projects are ignored. Thus, in the People's Republic of China, for example, where competition for university places is intense, geography examinations at senior secondary level comprise formal examinations. Further, curriculum objectives, despite efforts in reform, focus on knowledge and pedagogy is didactic, both of which discourage the freeing-up of examinations. The Indian School Certificate Examination (CISC, 2005), while giving some credence to traditional practical skills such as largely mapwork and the like, similarly emphasises the assessment of theory although like their Chinese counterparts clearly see the need for a more process based trajectory.

In other educational systems, a greater a move to open up assessment has taken place. This has been associated with diversity of assessment methods to improve curriculum matching across diverse aims For example, the Board of Studies in New South Wales (BOSNSW, 2003) sets objectives to develop

- (a) knowledge and understanding of spatial distributions and the processes and forces which show a geographical perspective at work;
- (b) skills of geographical investigation and communication; and
- (c) values and attitudes in respect to the environment and society. Emphasis is placed on key geographical ideas, thinking and using geographical concepts.

Summative assessment comprises

- i. a standardised external conventional examination using multiple choice, structured questions and extended responses (50 per cent and used for Tertiary Entrance requirements); and
- ii. internal assessment by the teacher to encompass a wider range of syllabus context and outcomes than may be covered by the external examination alone. This is standardised by a common specification of weighting – geographical research (10 per cent); interpretation and synthesis of geographical stimuli (15 per cent); geographical writing (20 per cent); and fieldwork (10 per cent).

The point is not to evaluate practice but to demonstrate one approach to diversity in the face of broad objectives. Diversity is similarly found in Edexcel Advanced Levels in the UK with formal written examinations assessing conceptual knowledge through data-based or semi-structured questions and a synoptic paper where students are required to draw together geographical understandings to interpret data (Edexcel, 2002). In addition, there is a teacher-assessed, externally-moderated personal enquiry or an examination based upon prior fieldwork.

The incorporation of fieldwork is a key feature in many of the attempts to reform summative assessments as objectives here are not easily addressed conventionally (despite the compromise of Edexcel). Marsden (1995) notes that the internal assessment of fieldwork offers advantages in shedding light on the abilities to creatively present and communicate findings including the use of Information Technology. Rightly, however, he points to concerns that threaten feasibility and reliability. Ensuring

standardisation and authenticity are issues but are generally felt to be addressed through moderation. It nonetheless requires acceptance that assessment is an art and not a science and that 100 per cent accuracy is not achievable; rather the aim is for acceptable accuracy. Not the least of the challenges is the administrative and supervision burden placed on teachers. For successful adoption, explicit space needs to be created within the curriculum. Thus, for this reason, the reformed geography curriculum for senior secondary students in Hong Kong, for example, has stipulated that 20 per cent of classroom time be allocated to a fieldwork project with concomitant reduction in the time for other elements.

To sum up, the efforts of the last two or three decades or so in summative assessment reform has been to find solutions to dilemmas posed by the need for increased diversity, better information and minimising the negative impact on learning (see for example, Marsden, 1976; Joseph, 1981; Orrell, 1985; Marsden, 1995; Lambert & Balderstone, 2000).

FORMATIVE ASSESSMENT IN GEOGRAPHY

Formative assessment, or assessment *for* learning, refers to assessment that is ongoing and undertaken to support future learning (Lambert & Balderstone, 2000) by its use in deciding how a student's learning can be taken forward through assisting the teacher to identify student strengths and weaknesses and, with the student to identify personal targets. It is a part of an effort to integrate assessment within the whole teaching and learning process (Lambert, 1991) and thus expresses assessment *in* learning. This has always been part of a teachers' work. However, it has often been carried out less systematically than is required to serve its purpose effectively and not always used in helping to identify the next steps in learning.

“Because formative assessment has to be carried out by teachers, there is an assumption that all assessment by teachers is formative ... (with) teachers changing their own on-going assessment into a series of ‘mini’ assessments each of which is essentially summative in character” (Harlen & James, 1997, p. 365). Feedback is central to the process and without it assessment will not support learning. Essentially, formative assessment involves using information about student learning gathered from observing students, listening to them discussing informally with their peers as well as when talking to the teacher, reviewing their written work and other products, and using their self-assessments. Gaining access to the ideas and mental frameworks that students have already formed, accurate or otherwise, is an integral part of teaching for understanding (Harlen & James, 1997). Only when this takes place is assessment formative.

Feedback is information about how a person did in the light of what he or she attempted – intent versus effect, actual versus ideal performance. It is the activity of providing information about how and why a student understands and misunderstands, and what directions the student must take to progress. Hattie (cited in Hattie & Jaeger, 1998) found, in a meta-analysis of studies, that feedback was the most powerful single

moderator that improves student achievement. However, it should not be thought that feedback alone is sufficient for learning. It is necessary but not sufficient and has to be accompanied by a clear understanding by the student of what is intended, an appropriate method to carry out the assessment and learners who are actively engaged in the process.

The Black and Wiliam (1998) review of over 250 articles showed that frequent feedback to students on their learning yielded substantial learning gains but those gains were maximised where teachers increased the richness of feedback and involved students deeply in the process of assessment. Hattie, however, commented that such feedback was rarely found in the classroom and often disregarded. The LEARN Project of the University of Bristol (cited by James, 1998) noted that the type of feedback valued by students was that which suggested how the individual student could improve his or her work and provided understanding of how work would be assessed. Explanatory comments were sought whereas simple grades or a personally focussed overgenerous comment, for example, "you have done well" did little to promote learning beyond the immediate, ego-boosting event. The quality of the discourse between the teacher and the student was crucial. A clear picture of what the student can now do and what needed to be done is required emphasising quality rather than quantity.

All this implies teaching following student learning with assessment as the tool to give direction to that process. It is based on the premise that teaching is powerful only when it is sufficiently precise and focused to build directly on what students already know and what is needed to take them to the next level. Teacher-student interaction goes beyond the provision of test results and includes the provision of additional instruction to assist the student in engaging with new ideas and problems (Torrance, 1993). Torrance notes how Vygotsky argued that what is important to identify is not just what a student has achieved but what he or she might achieve, what the student is now ready to achieve with what he or she has learned. Thus, learning should be "scaffolded" by students being set appropriate tasks and being provided with appropriate support, with the purpose and focus of assessment being to identify what it is that students can achieve next (Torrance, 1993).

To sum up, the aim is to construct a way forward through mutual articulation of achievement and critical appraisal, on the one hand, and the use of emerging criteria and the provision of strategies, on the other, along with praise integral to description. The constructive feedback that follows from assessment is not an inevitability but something that requires careful systematic practice within a geography curriculum that offers the space for formative assessment to happen. In some education systems as in England and Wales and in Australia, formative assessment is actively promoted but in others, for example in East Asia, the perceived curriculum focus is on quantity of coverage. This leaves the geography teacher little time or commitment to such processes, despite official rhetoric.

CONCLUSION

The more one delves into practices the more one realises how little is known about assessment practices, intentions and practices, across education systems and the more new questions arise. However, it is clear that assessment practices and the various uses to which assessment information is put cannot be seen in isolation. Some societies prioritise certain purposes over others. Some societies prioritise geographical knowledge vis-a vis using knowledge; some look for assessment that recognises and incorporates values, whereas others attempt to be values neutral. There is a common belief as Guskey (2003) has argued that, "Assessments can be a vital component in our efforts to improve education" (p. 11). Recognised, but only gradually being accepted in many education systems, is his further contention that,

... as long as we use them only as a means to rank schools and students, we will miss their most powerful benefits. We must focus instead on helping teachers change the way they use assessment results, improve the quality of their classroom assessments, and align their assessments with valued learning goals and state or district standards. When teachers' classroom assessments become an integral part of the instructional process and a central ingredient in their efforts to help students learn, the benefits of assessment for both students and teachers will be boundless (p. 11).

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SECTION B:

CONTEMPORARY SCHOOL GEOGRAPHY

JOHN LIDSTONE

INTRODUCTION SCHOOL GEOGRAPHY AND INTERNATIONAL TRENDS

There is an implication behind the creation of this section that what is taught under the banner of “geography” in schools is indeed influenced by trends that are international if not global. However, this may not be the case, and it is at least possible that what appears to be an international trend may more accurately reflect some form of hegemony, whereby countries who wish to emulate others socially or politically may try to adapt their education systems accordingly, or alternatively, countries which wish to have close relationships with others may try to persuade others to adopt similar education systems and curricula in order to make communications easier. Historically, many former colonies developed educational systems similar to those of their colonial masters and aspects of these remain long after independence was achieved, while more recently, many countries (often including former colonial powers) have “exported” their educational ideals, often under the guise of “aid”, again often to lubricate intercultural relationships, including, of course, trade. The result of these two sets of interactions has been what appears to be a series of “international trends” that have flowed around the world, especially via former colonies of European nations, and it is perhaps not accidental that the names of a relatively small group of geographical education theorists are cited in the work of curriculum designers and researchers in so many countries. The primacy of the English language in much international academic exchange has, of course facilitated this trend.

There are, however, large areas of the world where, for various reasons, there has been, and continues to be, relatively little contact with these “international” trends. A glance at lists of the membership of the International Geographical Union Commission on Geographical Education (IGU.CGE), the countries of origin of the papers in *International Research in Geographical and Environmental Education*, which received comment in Chapter 1 of this volume), and other similar journals, and more general edited volumes such as this one, reveals surprising geographical gaps. These gaps are all the more surprising when attendance at IGU.CGE Symposia are compared with that of the Congresses and Regional Conferences of the parent IGU. While language and availability of finance may account for some of the gaps (although surely the same limitations afflict those from our substantive field of study who wish to be part of the international community?), it is possible that others merely feel that the cultural differences between educational aims and ideology in their own countries and those elsewhere are barriers not worth attempting to breach. There may also be

some colonial remnants in the thinking processes of those who regard themselves in the “international mainstream” of geographical education that leads them (or should I say “us”?) to regard many of the remaining parts of the world as rather behind the times with little to offer from their particular experiences.

Such are the thoughts of this writer in introducing the current Section. Despite attempts to achieve a wider spread of reports, the reader will note that the chapters in this section include only school geography in Europe, North America, Latin America, Australasia, and Asia and it will be noted that several of the authors of these chapters acknowledge the omissions and exceptions that occur within their area of review. It is sad that relatively late in the preparation process of the volume, all contact was lost with the person who had agreed to undertake the possibly impossible task of reviewing current geographical education in Africa, while the lack of a chapter devoted to the Islamic heartland in the Middle East, nor the limitation of Asia to East Asia, will not be lost on the readership of this volume. It is, of course, entirely possible, that attempting such a global survey is regarded by some as of little value, or even as an inappropriate attempt to force an unnatural conformity on the world. One curriculum developer in Iran emphasised to this writer that the essential purpose of geography in the schools of that country is to ensure that students appreciate the location and historical justification of the borders of Iran so that they will be prepared to defend them if necessary, and this perception certainly placed a different perspective on the task of suggesting new approaches to curriculum. (It should be added here that this did not appear to be a common view at least during the tenure of President Khatami.)

Having acknowledged the “white space” in this global picture, what trends can be discerned from the reports contained herein?

Graham Butt, Michael Hemmer, Agustin Hernando and Lea Houtsonen approach their task by emphasising the diversity of practice within Europe through case studies from “Western Europe”, Scandinavia, “Middle Europe” and the Mediterranean, more specifically from England, Finland, Germany and Spain. They comment that geography is generally taught in schools in some form from the very start of the education process (from 3 years-old, in some contexts) through to the end of secondary schooling (up to 19 years-old) with a tendency for it to be best represented in the secondary curriculum in European schools. However, they note that numbers opting for geography as a discrete subject are generally declining at this level, with students being diverted either towards integrated humanities or vocational options. These case studies demonstrate that whereas it may be claimed that “geography” is being taught, there is little agreement between systems on precisely what the word implies. The educational aims for the school subject described as “geography” vary from those of enhancing “general knowledge” to “preparing for civic life”, while the “content” through which “geography” is to be presented is similarly disparate. The good news from Europe, however, appears to be that university level geography is maintaining its numbers and that geography teachers in Europe have generally had considerable contact with the subject at higher levels.

That preparation for civic life is emphasised in Finland (and perhaps implied elsewhere in Europe) demonstrates certain similarities with the situation in North

America, both Canada and the United States. Mansfield and Semple remind us that, in Canada as in the United States, geography must contend with “an approach to social studies that is dominated by history and civics”. However, while the problems of a loss of definition of geography appear in Canada with what is described as the “loss of key topics in physical geography to earth science or environmental systems”, South of the Canadian border, a similar lack of definition appears to have emerged from a different history. In the US, Social studies have for long been a combination of various social science and humanities disciplines, most often history, economics, political science, and geography. Psychology, anthropology, and sociology play a much smaller role in social studies while cross-disciplinary topics such as *citizenship* and *science, technology, and society* are frequently included in social studies curriculum frameworks. Sarah and Robert Bednarz, however, attribute much of the malaise of geography in the United States to the relatively small proportion of social studies teachers with a graduate level geographical education. It is pleasing to note that the situation regarding the qualifications and training of social studies teachers in geography is slowly improving and the conclusions drawn by the team preparing this report, Sarah Bednarz, Robert Bednarz, Dickson Mansfield, Stuart Semple, Ronald Dorn and Michael Libbee, suggest that when a subject area is clearly defined and differentiated from other subject areas, its status is more readily enhanced.

Margaret Robertson And Philippa Ferguson begin by reminding us that in Australia and New Zealand the curriculum heritage for geographic education is embedded in the social studies tradition associated with the USA but suggest that in the immediate aftermath of World War II, clear distinctions between the disciplines of history and geography were maintained. They cite comment from the 1980s that maintained that support for the traditional disciplines of history and geography reflected a socio-political agenda that favoured traditional ways of knowing linked with socially transmitted values and beliefs and note that in both Australia and New Zealand the politics of the mid-1970s and early 1980s were marked by a shift towards the left with the then ruling Labour parties embracing social justice for all and major spending on educational reforms designed to be educationally inclusive and providing pathways to success for all learners. This movement eventually led to redefinitions of school subject areas into what became known as “key learning areas”, called “Studies of Society and Environment” in Australia, whereby in theory at least, a wide range of disciplinary concepts are used to bring specific issues of society and environment into focus. It is noteworthy that the situation of geography in New Zealand appears to have remained healthier than in Australia, although with a new curriculum framework in its final stages, there can be no guarantees about the future.

Chi-Chung Lam, Peiying Lin, John Chi-Kin Lee, Sze Onn Yee and Guang Yang admit that time and data constraints limit their detailed review to only some countries of East Asia with the common factor being China and comment that across this region, “the encroachment of curriculum integration has started to take its toll”. Looking wider, they comment that in areas where integrated curricula have been in place for some time, geography has made little progress in terms of either time allocation or content. Interestingly, these writers appear to associate the decline of geography with

the rise of enquiry learning as well as noting that those countries with a strong colonial connection with Great Britain maintained separate discipline studies for longer, while those that came under United States influence adopted social studies earlier. They also note that where English has not been prominent in the school curriculum in the past, pressure to reduce time spent on other subjects has been “squeezed”. There seems to be common agreement across the countries reviewed that the development of thinking and other skills, most notably those associated with information technologies, is the essential role of school education, but as elsewhere in the world, it appears to be accepted without question that this is better achieved outside the established disciplines rather than within such frameworks. The great difference between Asian countries and the rest of the world as represented in this section, however, is the continued importance of public examinations, once derided elsewhere and now receiving greater attention as the innovation of “high stakes examinations”.

Maria Lúcia De Amorim Soares, Beatriz Ceballos García, Griselda Garcia De Martin and Fabián Araya Palacios have chosen to comment on the position of geographical education in Brazil, Venezuela, Argentina and Chile, but from a continental perspective comment that “Working as a geography teacher in any school in Latin America means recognising that there exists a brutal continuation of the inequalities experienced by the majority”. These writers move beyond the demands of national curricula and expectations based on the pressures of globalisation to remind us that “Geography is concerned with relationships in the world. Educating students is a process in which two social individuals, the teacher and his or her students are linked by ideas”. Despite this ideal, however, Griselda Garcia De Martin suggests that education in Argentina is in crisis, not least due a gap between teacher education and new knowledge in the discipline and the high workloads experienced by many teachers. Maria Lúcia De Amorim Soares echoes issues elsewhere in the world when she comments on suggestions that by failing to define geography sufficiently clearly, geography teachers permitted their subject to be weakened. It is interesting that in Brazil there is an integrated subject called *Human Social Relations*, that includes the basic concepts of nature, space, time and culture. For those of us working in Australasia, the links are obvious. However, faced with an average school life of its citizens of 4.9 years, it would be hard to criticise this decision. The situation in Brazil appears to contrast greatly with that in Chile as described by Fabián Araya Palacios. While a similar integrated curriculum is adopted, it appears to be firmly rooted in concepts of sustainability for which teachers and schools receive considerable support. Finally, Beatriz Ceballos García explains how French influence on the Venezuelan curriculum has resulted in an emphasis on citizenship within local community contexts.

When we seek common trends across the World as presented in this section, we notice the strong influence of post-colonialism, not to mention a colonial legacy, with language continuing to be a major influence on the spread of pedagogical and curriculum ideas. It may be noted that where geography has been ill-defined and differentiated from other social sciences, then integrated courses have often introduced, with their emphasis on equally ill-defined “skills”. Such decisions appear to have resulted from a conception of geography as memorisation rather than conceptualisation of global

issues and their solutions. While there does seem to be a trend towards integrated social studies courses, there appears to be a parallel trend towards dissatisfaction with the intellectual rigour of such courses, and a move towards “high stake” assessments especially where geography has been either maintained or reintroduced as an independent discipline. Perhaps the trend for geography education, at least in those parts of the World canvassed here, is upwards rather than as is so often suggested, towards further decline? For the rest of the World, their story is yet to be told.

GRAHAM BUTT, MICHAEL HEMMER, AGUSTIN
HERNANDO & LEA HOUTSONEN

GEOGRAPHY IN EUROPE

This chapter takes a somewhat selective look at the current state of geography teaching in European schools, principally through four national case studies. Any attempt to provide a truly comprehensive overview of geography teaching throughout the continent is obviously difficult within the limitations of a single chapter, however we have tried to offer a reasonable overview. Here the aim is to highlight the main issues faced by geography educators in schools, as well as to gauge the health of their subject in both primary and secondary schools. The countries chosen give a flavour of the diversity of practice within Europe – this has been achieved by selecting case studies from “Western Europe”, Scandinavia, “Middle Europe” and the Mediterranean (specifically from England, Finland, Germany and Spain).

Each of the studies has been written by an expert in geography education who is resident in that country, responding to a set of standard questions concerning the location of geography in the school curriculum; the status of the subject; the purpose of school geography; the way geography is seen by curriculum planners; and the future for geography in schools.

It is to be expected that there are variations in the “strength” of the subject in different national contexts. This relates not only to governmental intentions for the school curriculum and expectations of what (geography) education can offer to young people, but also to cultural, economic, environmental and social influences. However, as previous overviews of geography education in European states have shown (see Rawling, 2004), geography is generally taught in schools in some form from the very start of the education process (from 3 years-old, in some contexts) through to the end of secondary schooling (up to 19 years-old). There is a tendency for it to be best represented in the secondary curriculum in European schools – although numbers opting for geography as a discrete subject are generally declining at this level, with students being diverted either towards integrated humanities or vocational options. A healthy proportion of geography students goes on to study the discipline, or related themes, at university level at the end of their secondary education.

ENGLAND

GRAHAM BUTT

The past twenty years have seen successive governments introduce a variety of policy initiatives in their attempts to improve state education in England. Conservative

governments in the 1980s and 1990s sought to control the education system through the introduction of a National Curriculum, the creation of a national assessment system, changes to the management of schools and the introduction of more rigorous inspection regimes (Weeden, Butt, Chubb & Srokosz, forthcoming). New Labour swept to power in 1997, buoyed by their mantra of “Education, Education, Education”, but largely maintained the key education policies of the previous government. In essence, Labour simply shifted the educational focus onto raising achievement through better management of schools and the introduction of a number of “strategies” to improve teaching and learning.

Compared to the international situation, geography “seems to occupy a relatively strong position in English schools” (Rawling, 2004, p. 181). It is still part of a statutory National Curriculum for England, having been introduced in 1991, and is currently taught in some form to all students aged from 5 to 14. As an optional subject for examination courses it is still popular, but in decline, at General Certificate of Secondary Education (GCSE) level, at Advanced Subsidiary (AS) and Advanced level (A level) – the public examinations sat by most students at the ages of 16, 17 and 18 respectively in the English system.

Geography has suffered marginalisation as a result of government policies to promote literacy, numeracy and the “core” subjects since the late 1990s. Curriculum initiatives promoted by recent governments, whether they have been designed to strengthen the contribution of particular aspects of learning or to introduce completely new subjects (such as citizenship), have tended to affect geography adversely (alongside other “non core” subjects). Additional curriculum space for such initiatives has often been afforded at the expense of geography, a subject whose status and position within the curriculum has been threatened as a result. Once the numbers of students studying geography fall there is an inevitable effect on levels of staffing, resourcing and support offered to teachers of geography in schools. Nonetheless the more recent initiatives, such as those since September 2003 which have *reduced* the number of compulsory subjects at Key Stage 4 (14–16 years), offer some hope for geography to expand within the new requirements for humanities provision at this stage.

Geography in Primary Schools

The teaching and learning of geography in England is currently most threatened within primary schools. Recent inspections (OfSTED, 2004) have highlighted that geography is one of the weakest subjects at this level, a situation which has attracted comment from the Chief Inspector of Schools, David Bell (Bell, 2004), as well as from geography educators (see, for example, Marsden, 2005). This state of affairs largely results from the statutory implementation of a National Literacy and Numeracy strategy since 2000, the “space” for which has been created partly by the initial disapplication of geography from the primary curriculum. As a result geography is, at present, poorly served in the primary curriculum here the standards of teaching are generally low, leadership in the subject is often minimal and student attainment limited. The effects of such neglect are proving difficult to manage within the current

system, particularly given the lack of opportunities for professional development amongst geography subject leaders, poor funding, declining support and the generally poor levels of geography subject knowledge prevalent amongst most primary school teachers (see Catling, 2003).

Geography in Secondary Schools.

In 2004 the Office for Standards in Education's (OfSTED) main findings for geography in secondary schools in England were broadly positive (OfSTED, 2004). They found that nine out of ten schools had made improvements in teaching geography since they were last inspected, that student achievements were gradually improving (despite a decline in the numbers sitting external examinations), that use of ICT was more effective in geography than in most other subjects and that teaching was "good" in two thirds of schools. Even so, the standards of teaching are better at key stage 4 and post-16 than at the lower secondary level.

In this respect the situation in secondary schools is generally better than at primary level, although there is no cause for complacency. From 1995, until very recently, the greater number of compulsory subjects in the curriculum had "squeezed out" geography from many upper school timetables. This has occurred to such an extent that since the turn of the century geography at GCSE level has seen a fall in candidate numbers of over one third. This may partly have been a result of the generally poorer standards of geography teaching at lower secondary (Key Stage 3) level, the increasing employment of non-geography specialists to teach the subject, the unusually high candidate numbers for geography GCSE recorded in the late 1990s, and the need to update and revise the subject content taught. The last point has particular resonance given the flexibility now offered by the revised geography national curriculum since 2000 – geographers need to respond to recent curriculum initiatives, including the Key Stage 3 strategy, which provide opportunities for exciting teaching. Nonetheless, blame for declining numbers cannot be placed simply at the feet of geography teachers and educationists – whose efforts have often been diverted towards implementing numerous centralised initiatives, whilst also coping with massive changes in the examination system for 16 to 18 year-olds. Importantly, there remains an urgent need to take a new look at geography GCSE and A level syllabuses, which have not been properly reviewed or revised since the late 1980s. The factors contributing to candidate numbers declining is therefore a "complex interaction of national, whole school and departmental forces" (Weeden et al., forthcoming, 4).

Future Prospects for Geography Education in English Schools

Rawling (2004) highlights a series of current, or forthcoming, developments that may give rise to optimism for the future. She notes the continuing support for geography from its subject associations – principally the Geographical Association (GA) and Royal Geographical Society and Institute of British Geographers (RGS-IBG) – who have continued to attempt to influence government policy, whilst at the same time also

restructuring and repositioning their own organisations. Evidence of recent curriculum development projects, effective lobbying, increased professional development opportunities and the growing use of subject-based websites are all positive factors in the possible renaissance of geography education.

The Qualifications and Curriculum Authority (QCA) through a series of modestly funded projects, have established a new hybrid geography GCSE which has dovetailed with the government's desire to develop specifications which have the potential to combine both academic and vocational units. The geographical content of this GCSE is innovative and reflects, to some extent, more recent thinking within both subject and educational circles (Rawling, 2004). This opens up possibilities of greater debate about the content of *all* geography GCSEs, closer links to vocational initiatives and a more up-to-date and relevant geography being taught to students. Additionally the "Innovating with Geography" website, created in concert with the two main subject associations, is designed to support geography teachers in developing their geography curricula and teaching materials.

The shape and assessment of the 14–19 curriculum in English schools is currently under review. The government recently commissioned a report (DfES, 2004) on these matters from a Working Group led by Mike Tomlinson, a previous Chief Inspector of Schools, which was well received by the profession. However, its recommendations were largely rejected by the government – the report having, unfortunately, been published at a time when the Secretary of State for Education was being replaced.

FINLAND

LEA HOUTSONEN

The Status of Geography in the School Curriculum

Geography is a compulsory subject at all levels in Finnish schools which provide a general education. It is taught as a part of environment and nature studies in grades 1 to 4 and as an independent subject from grade 5 until grade 9 in comprehensive schools. Geography is also a compulsory subject for all students at the upper secondary level, where students are required to study a minimum of two geography courses, followed by the option of more advanced courses.

The Way Geography is Seen by Curriculum Planners and the Purpose of School Geography

The Finnish National Board of Education is responsible for drawing up principles for the construction of curricula in all the subjects that are taught in schools. New curricula, including those for geography, are being introduced in the period 2004–2006 in primary schools and from 2005 in upper secondary schools.

The starting points for constructing geography curricula in Finland have traditionally included a set of values defined as governing school education as a whole.

Cross-curricular themes have to be taken into account in all school subjects, such as general educational challenges of significance to society at large, which serve at the same time as statements of opinion on contemporary values. The cross-curricular themes are defined separately for primary education and for upper secondary schools, although the results are largely similar, with some variation in the description of the goals and content between the levels. The themes laid down for the upper secondary level are

- (1) Active citizenship and entrepreneurship;
- (2) Welfare and security;
- (3) Sustainable development;
- (4) Cultural identity and knowledge of cultures;
- (5) Technology and society; and
- (6) Communication and the media.

As far as the lower grades, 1 to 4, are concerned the goals for the teaching of geography emphasise environmental sensitivity and experiencing the environment. Teaching should help students to develop a favourable relationship towards nature and the environment – as a result teaching approaches and content should be chosen so that learning situations can be experienced through fieldwork. Students start out by studying their own immediate environment, but the scope should then be enlarged (even at the junior school stage) to cover Finland, the Nordic Countries and other adjacent areas. Students should also be enabled to acquire an understanding of the earth as the location for human life.

The aim in grades 5 and 6 of the junior school is to extend students' views to encompass the rest of Europe and other parts of the world. Teaching is arranged so as to provide an impression of the richness of natural and cultural environments to be found in the world and to create a foundation for international thinking and tolerance of other peoples and cultures. A further aim is that students should learn to draw and interpret maps and to use statistical tables, diagrams, pictures and electronic means of communication as sources of geographical information.

The aims in the secondary school, at grades 7 to 9, are to expand students' geographical views of the world and its regional and cultural variety, to develop their ability to examine natural, built and social environments, and to promote an understanding of cause and effect relationships. It is also intended that students should investigate people- environment interactions at all levels from local to global, so that they make sense of current events in the world and assess the consequences and implications for human action. One major objective is to encourage students to become active citizens, committed to a sustainable way of life such that every citizen in Finland can influence the planning and development of his/her own living environment.

The main aim of geography teaching at the upper secondary school level is to ensure that students can establish opinions of their own on matters concerning the constantly changing world around them and act as responsible world citizens on behalf of sustainable development. Teaching should help them to understand global, regional and local issues and provide the opportunities for resolving these. They should be

aware of the significance of region, space and place in geography and be supported in their use of information technology, including digital and other media sources. The compulsory courses in geography at this level are *The Blue Planet* and *A Common World*. In addition to this, all upper secondary schools offer as optional courses *The World of Risks* and *Regional Research*. The latter course provides an introduction to GIS methods and their applications.

The Future for Geography in Finnish Schools

One field in which increasing attention is being focused in the course of improving the teaching of geography in Finland is the development of learning environments – that is, the resources that students have at their disposal to help them to learn and to solve problems. The use of information and communications technology is currently one of the main areas of emphasis in the development of both university geography and the teaching of geography in schools in Finland. Teamwork and the sharing of information should be an essential part of the study of geography and in this sense a network-based learning environment can enable students to grow as members of the modern information society. Finland has therefore joined a number of development projects that are making use of network-based learning environments in geographical and environmental education.

Cartography and other visual presentation techniques are an integral part of geographical communication, such that graphics skills have traditionally been emphasised in Finnish geography teaching. Instruction in Geographical Information Systems (GIS) has spread rapidly throughout the universities and these techniques are gaining an increasingly significant foothold in professional circles, creating a demand to develop teaching in this field in schools. The Ministry of Education has financed a GIS project in teacher education, whilst the Finnish National Board of Education has initiated a project for developing such teaching in schools, has sponsored extensive supplementary education courses in geoinformatics for geography teachers and has arranged other short-term training courses on this topic. GIS courses for teachers have also been provided by other institutions, such as the Finnish Forestry Society. In addition, Finland is currently responsible for co-ordinating the EU-financed Geographical Information Systems Applications for Schools (GISAS) project, in which the International Geographical Union's Commission on Geographical Education is actively participating. This project involves schools and teachers in eight European countries and aims to create a model based on real-life classroom experiences to incorporate GIS into secondary school education in Europe.

Education for Active Citizenship and Participation

One aim for geography teaching in Finnish schools is to prepare all students for participating actively in civil society. Geography is believed to bear a particular responsibility for ensuring that all citizens are aware of their opportunities for influencing the planning and development of the environment in which they live.

This aspect of its teaching is being supported through the development of appropriate teaching materials and the provision of supplementary courses for teachers.

GERMANY

MICHAEL HEMMER

It is very hard to make unanimous statements about school geography in Germany, due to the federal structures of the Federal Republic of Germany. The fact that every federal state has control over the domain of its education and culture, means that each of the sixteen states issues its own subject-specific guidelines and school curricula. In addition, if one takes the different school types in each federal state into consideration, the spectrum of guidelines for the geography curriculum is complex and varied. Therefore the following statements about the status, objectives and future of school geography do not make a claim for completeness, but merely outline some general trends.

Importance, Objective and Orientation in Terms of Content of School Geography

Geography, as a subject, had always had a curriculum place in the Sekundarstufe I (years 5–10; classes with students aged 10 to 15). Apart from a few exceptions geography is a separate subject in all the types of schools (Hauptschule, Realschule and Gymnasium) in Germany. However, geographical content may be represented in the curriculum through integrated subjects and various combinations of subjects (for example, the subject *Gesellschaftslehre* (social studies) in Lower Saxony, or through the combination of the subjects *Geographie-Wirtschaft-Gemeinschaftskunde* (geography, economy and social studies) in Baden-Württemberg) – although these particular approaches are rather the exception, at present. The hours allocated for teaching geography vary in years 5 to 10 amongst the federal states – as well as by the type of school – between six and eleven hours per week. On average, students are taught 8.5 hours of geography in the Sekundarstufe I each week. The subject is mainly taught in double lessons in each grade, although it is not uncommon for single lessons to occur. In the sixth form (years 11–13) geography is an optional subject in nearly every federal state. Depending on geography's status (as either a compulsory subject, basic course or advanced course) the weekly hours vary in each state, from between three to thirteen hours. In addition geographical content is partially taught in "General Knowledge" in primary schools (years 1–4).

Although the space-oriented perspective is one of five perspectives in the subject titled "General Knowledge" (in which there are references to geography, history, social studies, biology, chemistry, physics and technical studies) the proportion of the curriculum which is solely geographical is very small. In every type of school the place of geography in the curriculum – despite its attention to physical form and process, and its way of seeing itself as a forging link between the natural sciences and social sciences – is assigned to the field of social sciences. Although officially there

is no differentiation between “major” and “minor” subjects, geography is generally viewed as the latter in German society.

The heterogeneity and fragmentation of the school curriculum reveals itself in each federal state and type of school. This may be the result of different didactic concepts being applied, through a different emphasis on the share of physical and human geography taught, or because of the ratio of *Allgemeine Geographie* (the explication of laws, for example, the stages of urban development in Central Europe) to *Regional Geographie* taught (the individuality of single regions, for example, the specific development of the town of Cologne) (Kirchberg, 2005). After the school curricula of the (old) Federal Republic of Germany were radically changed in the 1970s, largely in favour of a thematic-exemplary and educational goal-oriented approach, many federal states fell back upon a tried and tested regional structuring of their school curricula in the 1980s. The present situation in Germany is characterised by parallel, but different, conceptions of the school curriculum in geography. Both conceptions strive in their specific distinctness for conciliation between general and regional geographies. Most federal states, particularly former East Germany and Bavaria, favour a regional structuring after the classical principle of ordering things (*Vom Nahen zum Fernen* – literally, from close to distant things). One can only find aspects of the favoured structuring of the typical 1970s school curriculum in the topics of the *Allgemeine Geographie* in a few federal states (for example, North Rhine-Westphalia and Rhineland-Palatinate).

A common feature of all school curricula is that they emphasise the *Befähigung und Erziehung des Schülers zu einem kompetenten raumbezogenen Verhalten in der Welt* (Köck, 1993, p. 15) as the central objective of school geography. As such, they seek to establish the current subject-related and educational strategies – such as “learning on the spot”, the consideration of students’ interests, and “automatic learning” – as their favoured educational methods.

Current Trends and Perspectives

For some years, different interest groups in the Federal Republic of Germany have tried hard to get a standard structuring of the school curricula for the subject of geography. As a result, a *Grundlehrplan* for the *Sekundarstufe I* was devised by the Association of German School Geography in 1999 as a recommendation for working with the geography curriculum in every federal state. A similar objective was pursued by the *Curriculum 2000plus*¹ of the German Society for Geography, which was published in the year 2000 (Kirchberg, 2005). The tendency for a standardisation of the educational system in the Federal Republic of Germany is advanced by the formulation of *Nationaler Bildungsstandards* in recent times. At the same time curriculum change has occurred as a reaction to the international Pisa study of the OECD/CERI (Organisation for Economic Co-operation and Development/Centre for Educational Research and Innovation). This compared student performance in maths, sciences and languages in German schools unfavourably with that of students in other countries. Hence the skills which students should possess at the end of the

Sekundarstufe I for the subjects of German, mathematics and foreign languages – as well as for the scientific subjects of biology, physics and chemistry – have now been redefined. For geography, a group of geographic teaching methodologists, of whom the author of this case study is one, is currently working on appropriate skills, standards and typical exercises. In concert with the already available standards of education, six fields of competence have been identified for geography

- (1) specialised knowledge;
- (2) methodology/gain of insight;
- (3) assessment/evaluation;
- (4) communication;
- (5) preparation for the willingness and the ability to act; and
- (6) spatial cognition/orientation.

Besides the tendency towards a standardisation of the subject, there are some strong indications of movement in the content orientation of school geography. Above all, the drive for reevaluation of physical geography should be mentioned. In this context, an important policy paper, the *Leipziger Erklärung*, was passed in 1996 and claims a proportionate consideration of the geosciences in the German educational system. Although geographers perhaps see the subject as being at the centre of the geosciences, whilst also forging links between the natural and social sciences, physical geography often finds itself neglected. This is, in part, due to the reorientation of the subject in the 1970s and its assignment to the social sciences. At present, different interest groups, above all the *GeoUnion* (Alfred Wegener Foundation), are trying hard to consolidate their position within the natural sciences.

In any discussion of what currently constitutes the content of school geography one has to raise the question of the role of economics as a subject. While the subject associations for economics have claimed their right to an individual school subject for a long time, most federal states favour the integration of economics into the existing social science subjects. For example, each of the subjects of geography, history and politics in North Rhine-Westphalia are obliged to consider the inclusion of relevant aspects of economics education in their prevailing subject-based curriculum.

Despite the esteem that geography generally commands amongst the general public and within the student body geographers have to fight for its place in the curriculum. Geography faces a variety of challenges – not least the reduction of time that could be allocated to it in grammar schools, the increasing competition from other subjects in the curriculum, the lobbying of other subject associations, and the (re) establishment of new (and old) school subjects. Its failure to achieve “Pisa subject status”, as well as the continued introduction of integrated subjects into the curriculum, could further accelerate the reduction in teaching time for geography – a process which began in the 1960s. The position of geography in the range of subjects available at sixth form level is also problematic. If geography is in danger of no longer belonging to the compulsory canon of subjects offered in years 9 and 10 this will have a further negative impact on its selection by students about to enter the sixth form.

SPAIN

AGUSTIN HERNANDO

The teaching of geography in Spain has been affected by far-reaching social, educational and academic changes. The introduction of social studies in the 1970s eclipsed those subjects formerly taught under the broad heading of “geography”, with their resulting loss of importance and identity. Subsequently other significant changes have occurred, including the expansion of the number of years of study in secondary education and the widening of the student base being taught there; a succession of political parties holding power and enacting their own legislation in the field of education; the existence of a highly experienced body of teachers, well-trained to perform their job in the earlier systems of education, but showing symptoms of fatigue when having to face new challenges or having to implement reform measures; and, teacher training programmes that make greater demands on teachers’ professional and pedagogic roles but which reduce their academic or geographic roles. Geography in the universities, traditionally leading the way in terms of course content and the initiatives to be adopted in teaching, no longer displays the vitality and persuasive power it had in the past. Moreover, following the reforms introduced by European directives, university based geography education has entered a phase of reform.

Geography is tied closely to the teaching of history in Spain’s compulsory secondary education system (*Enseñanza Secundaria Obligatoria* – ESO; 12-16 year-olds), with the content and the intensity of geographical studies taught being determined by textbooks and teachers. In the *bachillerato* (16–18 year-olds) geography is introduced as a subject in its own right, although it is not compulsory for all students at this age. Geography curricula are based largely on general geographic studies, with examples taken from regional geography. Although the curricula include subjects drawn from physical geography, the greatest weighting is given to human geography – with students studying population, economic activities and cities. Regional studies are organised by criteria of scale, centred on their contribution to the various national, state, European and global identities. Some subjects include the study of current developments and issues, such as landscape studies.

Students do not sit any external examinations – although plans are afoot to introduce standardised tests that should assess the quality of knowledge acquired – but several studies indicate that the results obtained from testing are not very promising. Geography is seen as a social subject that should promote general knowledge, which partly accounts for the importance attached to rote learning, enhancing vocabulary and the acquisition of a wide range of facts. However, within education there are signs that traditional forms of teaching are beginning to be rejected and, as revealed by a number of projects, other methods are now being promoted such as undertaking fieldwork; the publication of textbooks that include a greater variety of activities; and the growing use of new information technologies.

The availability of technological resources constitutes one of the most notable improvements over the last decade. The official curricula include all the categories contemplated in curricular theory. This accounts for the detailed listing of objectives

and the emphasis that is placed on skills and processes. By contrast, assessment criteria and recommended methodologies are barely described. The reason for this lies in the humanistic tradition that has long governed Spanish education – specifically the transmission of knowledge. We lack those profiles in which different styles and types of learning and the potential levels of assimilation at each stage of schooling are itemised (that is, a “progressive” education), which prevents us from identifying, qualitatively and quantitatively, the goals achieved and from drawing comparisons. In addition to providing an understanding of social phenomena and their distribution at a range of scales, the student should also acquire certain intellectual skills and develop a sensitivity for the subject. Yet these qualities can hardly be expected to be promoted using curricula in which so much importance is attached to factual knowledge.

Coming into contact with the students’ surroundings is another of the main principles underlying the teaching of geography. If we take the study of rivers as an example, together with an appreciation of the subject illustrated at a range of scales, it is important to promote an awareness of the sustainability of rivers and to appreciate their importance for Mediterranean culture and its environment. At present, textbooks remain the main source of what should be taught and learned in geography in Spanish schools. If the conditions in the classroom allow, the transmission of information is the dominant teaching method, combined with the undertaking of other activities and the correction of exercises. Tutorials also constitute an essential element in the educational culture. As such, methods based on research and enquiry are rarely adopted. The resources that are available do not encourage the use of student-centred approaches and the teachers do not have the will, training or time to design their incorporation. The growing conformity and resistance to innovation is due to the increase in tension with the education authorities; the indifference shown by society to the work of the teacher; and the general discouragement felt when facing the magnitude of the problems, in particular, the rapid rise in immigration of recent decades – a situation that does not affect the private sector (providing about fifty per cent of secondary education) to the same degree. The marked transformations that society has undergone, the importance acquired by information technology, legislation that favours a less academic and a more professional training of teachers and the situation of dispersed knowledge that academic geography now has to face require imaginative solutions that are difficult to forecast.

Spain today is a society that needs people endowed with values such as discipline, responsibility, initiative, competitiveness and a co-operative spirit. The growing presence of information technologies gives rise to the need for people who know how to access information and to put its potential to effective use. Education, controlled by a strong curriculum, should ensure that geography and other subjects serve as resources for attaining certain intellectual, social and practical qualities. At the same time, the academic situation is marked by growing specialisation and the cultivation of new fields far removed from the traditional concerns of geography, although for the education authorities and teachers the identity of geography remains immutable. The absence of initiatives for reform from among the teachers themselves speaks volumes. The lack of social commitment to education is somewhat surprising, annoying even,

despite the succession of reform measures aimed at improving it. Additionally, the ideological confrontations unleashed by the subject's humanistic content and the identity that they should promote have detracted from the debate as to what type of alternative culture or education might be established.

CONCLUSIONS

From these limited case studies gathered from across Europe we can attempt to highlight common characteristics, issues, strengths and challenges within geography education in European state schools. Despite obvious variations, which one would expect to correspond to different national contexts, the following strengths within geography education in schools are apparent

- Geography has a long-standing place and function within schools across Europe. This tradition is respected and valued, with most countries considering the possession of some form of geographical education as being desirable for its young people. However, the role that geography education fulfils is now changing in many states – geography *per se* may no longer be considered important as a single, discrete subject. In many countries some form of “geographical studies” (rather than geography) is seen as a vehicle for developing education about sustainable development, environmental concerns, citizenship and even political literacy, rather than geography being taught as a valuable subject in its own right. The creation of autonomous, active and participatory citizens is now a feature of the aims of geography education in many European countries.
- Geography has benefited from the increasing use of information and communications technology (ICT). Where geography teachers have embraced this medium the teaching of their subject has often become more lively, interesting and topical. There is evidence that the use of ICT by students not only develops them as geographers but also extends their understanding and skills in the use of technology, with concomitant benefits for the development of life and vocational skills.
- Geography remains a popular and dynamic subject at university level. Students therefore have a “high status” end point to aim for should they wish to pursue their geographical studies beyond compulsory schooling. Nonetheless the common fragmentation of the links between school and university geography, leading to increasing dislocation in content and aims, presents something of a concern.
- There is still debate about what constitutes a “geographical education”. Given the various ways in which elements of geography, or “geographical studies”, are conveyed to children through the curriculum this debate will continue. Interestingly, this process can either be viewed positively or negatively.

Nonetheless, there are also significant – and increasing – challenges faced by geography education, as highlighted within the case studies reported in this chapter

- Geography is often an established subject at all stages of state school education, but now faces the pressures associated with declining student numbers – particularly at secondary level. Although represented at secondary, primary and even pre-school levels geography is facing stiff competition from other subjects, or subject groupings, within often rapidly changing curricula. This is occurring whether geography is taught as a separate subject, through integrated humanities courses, or through other aspects of the school curriculum.
- Competition for curriculum space comes from what are regarded as “core subjects” – such as English, home language, mathematics and sciences – or, increasingly at secondary level, from vocational subjects, history or relatively recent additions to the curriculum (media studies, psychology, citizenship, etc.). Tensions may also still exist *within* school geography regarding its alignment to the social or physical sciences, the representation of physical geography, the extent to which regional geography is taught, and the balance between content- or skill-based education.
- Geographers at all levels of education need to provide a clearer, more convincing and coherent picture of their subject for a range of stakeholders. Its contributions to, and importance within, a broad and balanced liberal education need to be rehearsed. At present education policy makers, parents, employers and the students themselves are unclear of the contribution that geography can make, either to an “all round” education, or within a vocational setting. The value of receiving a good geographical education currently appears to be poorly communicated and little understood.
- The drive towards performance led education, standards and accountability – particularly through various nationally applied assessment and inspection systems – has had a largely negative impact on the teaching of geography (and indeed other non-core subjects). This is seen in the concentration of resources and opportunities in other curriculum areas, as well as a general dearth of curriculum development projects in geography at all spatial scales from local to national.

These findings largely concur with Gerber’s overview of geography education at the global scale (Gerber, 2001) – particularly with respect to geography being a mandatory subject at lower secondary level but optional after that, to there having been a steady decline in student numbers opting to study geography at upper secondary level, and to geography facing increased competition from other (often vocational) subjects in schools. With regard to geography education in schools across Europe Gerber’s statement that geography requires “much to be done to sustain its position in the different curricula over the next decade and beyond” (Gerber, 2001, p. 362) now approaches the status of a truism.

Recent reflections on whether geography has now achieved the unhappy status of being the “worst taught subject” (as has been claimed in England, at primary school level) have been offered in response to a guest editorial by Bill Marsden in the journal *International Research in Geographical and Environmental Education* (Marsden,

2005). Many of these national perspectives (Lidstone, 2005; Chi-chung Lam, 2005; Ostuni, 2005; Probald, 2005; Haubrich, 2005; Semple, 2005; van der Schee & van der Vaart, 2005; Stimpson, 2005; Marran, 2005), which include some from Europe, make for rather salutary reading. However, the picture is not wholly negative and our task must surely be to hold on to – and enhance – the positives. As Probald (2005) rightly concludes, “in order to win the next battle geography educators need higher morale and to gain the support of the academic community, the general public and the mass media” (70–1).

ENDNOTES

1. All documents can be retrieved from the website of the “German Society for Geography” (www.geographie.de) or rather their partial associations.

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GEOGRAPHICAL EDUCATION IN NORTH AMERICA (CANADA AND THE UNITED STATES OF AMERICA)

In this chapter, a collection of geography educators portray contemporary school geography in North America at both the national and state/provincial scales. First, T. Dickson Mansfield and Stuart Semple describe geographical education in Canada examining the public perception of geography as instrumental in its successes and failures as a school subject. Secondly, Sarah Witham Bednarz and Robert Bednarz review school geography in the United States using the heuristic device, SWOT (strengths, weaknesses, opportunities, and threats) analysis, to assess its current status. Finally, two case studies presented by Ron Dorn and Michael Libbee describe geographical education in Michigan and Arizona, respectively, showcasing examples of successful and imaginative programmes in school geography.

CONTEMPORARY SCHOOL GEOGRAPHY IN CANADA T. DICKSON MANSFIELD & STUART SEMPLE

The Canadian Setting

Canada is a federal state in which education is the jealously guarded responsibility of ten provinces and three territories. Unlike the United States, it has no federal office or department of education, though it does have a Council of Ministers of Education whose role is largely consultative. Nevertheless, the country may be divided into four regions on the basis of curriculum making in geography and the social sciences

The first of these, the Atlantic Provinces, consists of Newfoundland and Labrador, Nova Scotia, Prince Edward Island, and New Brunswick. It was in this region that the Atlantic Provinces Education Foundation (APEF) began work in 1993 on a curriculum framework for designing programs in the social studies across all four provinces. The second of the four regions is Québec and the third Ontario recent developments in both have affected the status of geography adversely. The fourth region consists of Manitoba, Saskatchewan, Alberta and British Columbia; and the northern territories of the Yukon, Northwest Territories, and Nunavut. Like its Atlantic counterpart, this region formed a consortium as a matter of cost-efficiency in the joint planning, development, and production of curriculum resources (Western Protocol for

Collaboration in Basic Education (K–12)). Unlike APEF, however, the consortium has seen its members go their separate ways while retaining a common framework for grades K–8. One point of difference among them has been the development of separate geography (and history) courses, as in Manitoba, rather than courses in social studies with some geographical content; another, the policy on examinations (Semple, 2004, pp. 173–174).

Whatever the curriculum configuration, geographical education in Canada must contend with an approach to social studies that is dominated by history and civics. Depending upon teachers' openness to geography's viewpoint in social studies, the soundness of their own knowledge of geography, and their skill in teaching it effectively, geography may be strongly present or barely visible. As in the United States, the approach has generally resulted in a low level of basic geographical understanding; it has affected the way relationships are viewed over both time and space, whether in the physical domain, the human domain, or in interaction between humans and their environment. This outcome is in marked contrast to the expectations held for literacy and numeracy in an age dominated by English, mathematics, and science. It does, however, help to explain the results of a poll in 2002 that found Canadian scores in geographical knowledge to be third from the bottom among nine participating nations, and only slightly ahead of the United States and Mexico (Mansfield, 2005, p. 7).

In 1991 the Education Committee of the Canadian Association of Geographers, chaired by Richard Baine (Baine, 1991), surveyed the status of geographical education in terms of enrolments, numbers of courses, and qualifications of teachers; more than a decade later, these three remain important indicators of status. Equally revealing today, however, is the way in which administrative decisions can prove detrimental to geography. The loss of key topics in physical geography to earth science or environmental systems is a case in point; so too is the spillover from administrative decisions taken elsewhere in the curriculum for reasons not directly related to geography.

The Baine report noted the absence in Canada of any geography courses between kindergarten and grade 6. Over that range of grade levels, a mixture of courses was offered under the general classification of 'Social Studies', and these mandatory courses were virtually the only vehicles through which any geographical subject matter or skills might be taught (Baine, 1991, p. 6).

The report also found the border between Manitoba and Saskatchewan to be a clear boundary between western provinces that offered few geography courses and those to the east, notably Ontario, that offered most of those available in Canada (Baine, 1991, p. 6). Ontario, Canada's most populous province, has in fact been traditionally its strongest in the number of geography courses, the specialist training of its teachers, and the professional support given them over the past fifty years by the Ontario Association for Geographic and Environmental Education (OAGEE). Yet, even in Ontario, geography has recently faced a variety of challenges, so much so that the province offers an instructive case study of the visibility and availability of geography in Canadian schools.

Ontario A Case Study in Challenges

Readers of the Baine report were cautioned against a misleading picture of the health of school geography in Ontario. The province's high dropout rate after grades 9 and 10 was significant because, of 17 mandatory courses in the whole of Canada, all were in grades 7–10 (Baine, 1991, p. 6). In Ontario today, geography as a *compulsory* core subject under its own name is limited to grades 7, 8, and 9; its total teaching time of 220 hours, spread over 3 years, is the highest to be found in Canada. Geography is not offered at grade 10 level in Ontario but is available as options in grades 11 and 12. Although structured separately for students who are destined for post-secondary education or the workplace, those optional courses exhibit the same expectations as the grade 9 course Geographic Foundations, Space and Systems, Human-Environment Interaction, Global Connections, Understanding and Managing Change, and Methods of Geographic Enquiry (Mansfield, 2005, p. 32).

Yet it is precisely here that Baine's caution about the health of school geography has force; for not all of the approved courses will in fact be offered. A base threshold of 25 students is usually required if a school is to offer a course. Geography courses, *approved* by the provincial ministry of education for grades 11 and 12, might not *actually* appear on the option sheets that schools or school boards ask students and their parents to complete. Moreover, while those courses fulfil requirements for graduation from high school, so too would an additional course in English, a third language, one in the Social Sciences and Humanities, or one in Canadian and World Studies taught from the perspective of history, politics, economics, law, or geography (Mansfield, 2005, pp. 31–32).

These things are best understood against the important decisions students must make in grade 10 concerning optional courses in the final two years of secondary education. Yet grade 10 is the one grade in which geography is *not* offered in Ontario this has some bearing on whether a base threshold is achieved for a geography course to be offered in grades 11 and 12. Furthermore, as students often choose their future university programmes well before leaving the high school, it may also affect recruitment to post-secondary programmes in geography (Mansfield, 2005, p. 11).

Admission requirements for post-secondary institutions tend to reinforce the dominance of English, mathematics, and science in the curriculum. Exceptions aside, few require or suggest geography courses in high school as precursors for entry to their geography-related programmes, or allow for them when they have been taken. Yet growing numbers of students in the Advance Placement and programmes have completed courses that are as rigorous as most first-year introductory courses at university level (Mansfield, 2005, p. 14).

Public perception and expectation present yet another challenge for geography. While the principle of provincial testing is a contentious issue for many, its practice for some subjects, and not others, sends a message to parents, students, teachers, and administrators alike as to what is really important in the curriculum. The core subjects of language arts and mathematics are tested three times before students enter grade 11.

Neither social studies, nor history, nor geography is tested in the same period of time (Mansfield, 2005, pp. 12–13).

As well, changing priorities and financial constraints at government, board, and school level have affected leadership in curriculum development, the maintenance of standards, and the provision of subject-based professional development in Ontario. In this, geography has not been the only subject affected. In former times successful and well-qualified teachers would have been appointed to leadership roles as consultants at government and board level. Today, there are few consultants in general and almost none with a dedicated portfolio in geography. The pressure of financial constraint has also been felt at school level and former subject department headships have often been replaced by headships that are more broadly administrative in character (Mansfield, 2005, pp. 13–14).

Of all the challenges facing geography in Ontario, however, none is more basic than that of teacher preparation and placement. As elsewhere in Canada, the issues revolve particularly (though not exclusively) around social studies. They are implicit in the Baine report are teachers predisposed to recognise the value of a geographical perspective in the social studies? Is their knowledge of geography sound enough for them to teach it with integrity? Are they trained sufficiently in methods to teach it effectively? In Ontario, where geography in grades 7 and 8 is usually taught by the core or regular classroom teacher, the answer to those questions might well be a negative one. Even at the secondary level, where teachers receive basic qualifications in two teachable subjects, hiring agendas may result in their being appointed to teach geography with minimal or no background in the subject. This is even more likely when school principals consider geography a ‘general subject’ that anyone can teach (Mansfield, 2005, pp. 15–16).

If teacher placement is often problematic, teacher preparation is no less so. The programme for elementary school teachers (K–8) at Queen’s University, in Kingston, Ontario is fairly typical of the pattern of teacher training across Canada. Language arts, mathematics, and science *each* receive 36 hours of curriculum contact time. Social studies in grades K–6, and history and geography as separate subject in grades 7 and 8, receive a *total* of 18 hours. At the secondary level, a minimum of 72 hours is allocated to basic subject qualifications and students spend up to half of a 13-week school-based practicum in the geography classroom. As explained earlier, however, administrative agendas at the time of hiring might result in this professional preparation not being matched by the teaching appointment (Mansfield, 2005, p. 16).

Beyond Ontario Challenges and Initiatives in Geographical Education

The present state of teacher education in Canada is of particular concern to the Canadian Council for Geographic Education (CCGE). Under its leadership, summer institutes were organised in the early 1990s at Queen’s University along the lines of those established earlier in the United States by the National Geographic Society’s state alliances. These and short-term courses for degree credit, may well be needed to fill a growing void in Canadian faculties of education for the specialist training

of geography teachers. Outside Ontario and Quebec, which already have well-organised associations for supporting teachers, the CCGE has also been promoting the development of chapters for professional development at grassroots level. This is an important initiative, because subject associations for teachers in other parts of the country are organised on the basis of social studies. These, like the provincial curricula themselves, are strongly influenced by history and civics. Highly successful chapters have been operating in British Columbia and in Newfoundland and Labrador. One had also been established at Regina, Saskatchewan. In 2005, a Nova Scotia chapter was formed; so also was one at Edmundston, New Brunswick, for French-speaking teachers of Acadian descent.

As a case study, Ontario is instructive, not only for the challenges to geography but also the responses they have aroused. The subject's present state in Ontario has emerged from an even more radical proposal for a 'common curriculum' that would have delayed the emergence of separate subjects until after grade 9. The proposal mobilised the geographic community to an extent previously unknown. While the outcome might not have been all that geographers wished, it was still better than what had been proposed – and often is, in other parts of Canada. The events in Ontario can therefore be helpful elsewhere in addressing the three most critical factors in the health of school-level geography in Canada curriculum, teacher qualifications, and public image. The key to all three lies in effective networking.

Ideally, a nationwide survey of curricula and teacher qualifications, and a continuously updated data base, would form the basis for representation to government; in practice this has been more difficult to achieve. Canadians have been slower than others to build the type of broad network that rallied to the defence of geography in England and made possible the National Standards in the United States. The CCGE was instrumental in publishing *Canadian National Standards for Geography* in 2001. More recently it has been working with partners in the development of lesson plans. Nevertheless, Canada lacks at the national level a body with the resources, organisation, and publishing output of the Americans' National Council for Geographic Education (NCGE). Nor has it the equivalent of the Geography Education National Implementation Project (GENIP), which has been a steering committee in the United States for education outreach by the four US professional organisations of geographers. This may now be changing. The Canadian Association of Geographers (CAG) has shown growing concern for the state of school geography and is lending its support. Its Education Committee is now a formal Study Group and a valuable website has been established. Links with the school-oriented CCGE are being strengthened in a way that will encourage, when necessary, regional support of the type mobilised in Ontario.

The interface between secondary schools and post-secondary institutions is now being viewed by some of the latter as an arena of interaction rather than a boundary. While contacts have long existed between schoolteachers and academics on an individual basis, there are institutional reasons for probing possible links between high school enrolments and recruitment to post-secondary programmes. Here again, the case of Ontario has been instructive, especially in the wake of its decision to shorten

schooling from a 5-year high school and 13-grade system to one of 4-years and 12 grades. The resulting double cohort of graduating students strained the capacity of the province's post-secondary institutions. Yet the effect of the double cohort was not reflected commensurately in all of their geography programmes. Enrolment in some programmes actually declined in absolute numbers, while in others it stayed the same or even grew; but few, if any, grew at the same rate as those in history and psychology. At school level, meanwhile, great pressure has been exerted on all grade 11 and 12 optional courses, geography among them. As students focus on 'core' subjects, in order to meet post-secondary admission requirements, fewer of those optional courses, though *approved*, are *actually* being offered (Mansfield, 2005, p. 12).

Geography's public image, however, remains the fundamental issue it is the key to knowing how geography can best contribute to understanding Canada as a place. The Royal Canadian Geographical Society (RCGS), parent body of the CCGE and the most broadly representative geographical organisation in Canada, has a key role to play in this as a body whose motto is "Making Canada known to Canadians and the world". With substantial funding from the National Geographic Society, the RCGS has begun a national programme to raise the public profile of geographic literacy in Canada. It is committed to achieving a greater role for geography in the classroom and curricula across the country. The first steps toward this objective were taken in 2005 when its geographic education committee, the CCGE, launched a three-stage Geoliteracy Project with a national survey. The survey of more than 2,000 respondents revealed that a third of the adults were geographically illiterate. More serious was that 40 per cent of younger respondents, around the age of 21, were also in that category. The older group had at least taken its last geography course at grade 11 or 12 level; but the younger group took it at grade 9 or 10 (RCGS survey, 2005). The survey was followed in June 2005 by a national symposium, which it organised with the CAG, under the title *Projecting Geography in the Public Domain* (www.ccge.org). The third stage consisted of cross-country internet forums designed to heighten awareness of the need for geographical knowledge. Overall this initiative by the RCGS is expected to continue for a number of years (RCGS Annual Report, 2005, 4 and 10).

CONTEMPORARY SCHOOL GEOGRAPHY IN THE UNITED STATES

SARAH WITHAM BEDNARZ & ROBERT S. BEDNARZ

This section focuses on school geography in the United States. The primary discussion is organised into four parts. The section begins with a brief description of geography's position in the curriculum and how it has developed. This discussion provides the historical context necessary to examine competing conceptualisations of geography advanced by the *Guidelines for Geographic Education* (1984), the *National Geography Standards* (1994), various state curriculum standards, and popular textbooks. Next, the current state of geography instruction and efforts to improve its practice are described. Following this assessment, a SWOT analysis is employed to identify

school geography's prospects. This section concludes with a few observations about the connections between school geography and the discipline of geography.

School Geography and its Development

For the most part, geography is taught from kindergarten (K) through grade 12 in elementary (usually grades K to 4), middle (grades 5 to 8), and secondary (grades 9 to 12) schools in the United States as part of the social studies. US students generally study four core subjects language arts (reading and writing), mathematics, science, and social studies. Social studies are a combination of various social science and humanities disciplines, most often history, economics, political science, and geography. Psychology, anthropology, and sociology play a much smaller role in social studies while cross-disciplinary topics such as *citizenship and science, technology, and society* are frequently included in social studies curriculum frameworks (NCSS Standards, 1994). During their university studies, most social studies teachers concentrate on history and frequently have little formal course work in, or understanding of, geography or the other social sciences. Social studies teachers who majored in geography account for fewer than 10 per cent of the total, 5.15 per cent of elementary, 6.31 per cent of middle school, and nearly 12 per cent of high school instructors (National Geographic Society, 2005).

In the United States, educational governance is primarily the responsibility of the states. Each sets its own social studies curriculum, and in some states, such as Colorado and Iowa, local school districts have almost complete control of course content and pedagogy. This results in tremendous variety and increasing diversity in what is taught at a particular grade level. The growth of local control makes it extremely challenging to characterise the content of school geography in the United States today. However, a few generalisations can be made. First, the social studies curriculum is largely organised following an expanding horizons perspective, beginning with study at the scale of the individual and moving outward in yearly increments (self, community, communities, state, nation) culminating in some sort of world study in grade 6. Secondly, despite the supposedly integrated nature of social studies, history dominates. The good news is that geography takes second place. Estimates are that 60 per cent of social studies content consists of some blend of history and geography. At some grade levels, however, the curricula emphasise history (for example, in grades 5 and 8, students typically study U.S. History) whereas at others, the focus is geography (for example, in grade 4, students typically spend a year studying the geography and history of their state or sometimes, the geography of the United States). As a result, although all state social studies curricula contain a geography strand, only 55 per cent of US young adults responded 'yes' when asked if they took a geography course in grades 7 through 12 (National Geographic-Roper ASW, 2002). Thirdly, middle school is where the largest amount of geography is taught. Often in grades 6 and/or 7 a stand-alone course is identified as geography. Although there is tremendous variety most typically this is a year-long course focused on world regional geography. The course may contain some physical geography but that content has traditionally been

taught through an earth science component of the science curriculum at this grade level. Fourthly, at the high school level, geography is not widely taught. Twenty four per cent of students take a geography course in US high schools (National Center for Educational Statistics, 1998). Only four states and Washington D.C. require a stand-alone geography course for high school graduation. Less than ten per cent of the students who take a high school level geography course do so because they choose to (Wdowiarz–GENIP Report, 2005).

However dismaying this picture may be, it is an improvement. Geography has been on an upward trajectory from an alarming low point in the early 1980s (Hill & LaPrairie, 1989; Grosvenor, 1995; Bednarz, Downs & Vender, 2004; Bednarz & Bednarz, 2005). Some have characterised this as a *renaissance*; there is little doubt that both the quality and quantity of school geography has increased in the last quarter century.

Much of the credit for geography's rejuvenation should go to the National Geographic Society. Beginning in the mid-1980s, they generously contributed capital, both financial and social, to improve the status of school geography. Their presence supported, perhaps even enabled, the work of a core group of visionary geographers committed to re-establishing geography in the schools. This effort led to the development of a national network of state-based alliances, partnerships between geography professors and social studies teachers who self-identified as geography teachers. These Alliances were co-ordinated by the National Geographic Society (NGS) in conjunction with the American Geographical Society (AGS), the Association of American Geographers (AAG), and the National Council for Geographic Education (NCGE, the traditional geography education leader). They conducted an array of professional development opportunities for teachers designed to improve teachers' knowledge of geography content ('you can't teach what you do not know') and innovative and effective ways to teach the subject. From 1986 to the late 1990s, the Alliances thrived, improving geography instruction at the grassroots level and public awareness of geography's role in education.

Geography was also strengthened by changes in educational policy at the national level. In 1989, it was designated a 'core discipline' by the federal government (Goals, 2000, 1998). National Standards were developed (1994), and the first national assessment of geographical knowledge and skills was conducted in 1992 and repeated in 2002. At the state level, geography's position improved with the development of state educational Standards (often based, in part, on the National Standards) and, in some cases, high-stakes assessments. Since the late 1990s, however, geography's trend line has been negative. The reasons for the decline – and for its recent upturn – will be discussed later. The next section examines the changing nature of school geography.

Conceptualisations of Geography

Conceptualisations of school geography have changed in the last four decades. The *Guidelines for Geographic Education* (1984), developed by a committee of geography

educators from the AAG and the NCGE, laid the foundation for a renaissance in US geography education by introducing a simple but compelling framework. Termed the five themes of geography – location, place, human-environment interaction, movement, and regions – the framework defined geography as more than merely *capas and bays* place location. The five themes were widely disseminated via Alliance staff-development ‘summer institutes’ from the mid-1980s to the mid-1990s.

Although the themes took on nearly iconic importance they were not used to organise the *National Geography Standards Geography for Life* (1994), developed under the auspices of the US Department of Education, partly because they did not explicitly include physical geography and other aspects of academic geography. The Standards, structured around six essential elements and 18 standards, were a comprehensive statement of key geography knowledge and skills. This document outlined what students should know and be able to do at three benchmark grade levels grade 4 (completion of elementary school), grade 8 (the end of middle school), and grade 12 (completion of high school). The Standards were published after the initial period of intensive Alliance training. Many geography teachers who had recently been introduced to the themes, were confused by the presence of a ‘new’ view of geography and resisted moving from the themes to the richer conceptualisation of geography offered in the Standards.

Despite slow adoption by individual teachers, the voluntary national Standards were incorporated in key state and school district curriculum standards in the late 1990s. Today they are accepted by a growing number of geography teachers although it is not uncommon to see curriculum documents that incorporate aspects of the Standards in a framework of the five themes (or visa versa), an interesting hybridisation of the two conceptualisations.

This situation is illustrated well by social studies and geography textbooks. Textbooks serve as the primary intellectual and pedagogical resource for the majority of US social studies teachers (Bednarz, 2004; Chambliss & Calfee, 1998; Finkelstein et al., 1993; McCutcheon, 1981; Stodolsky, 1989). US textbooks are produced by a small number of large publishing houses. Books are selected for purchase by teacher-led committees. Because teachers are responsible for the selection of texts, publishers align their offerings to teacher conceptualisations and preferences. Only when teachers are ready to adopt an innovation (such as transitioning from the five themes to the National Geography Standards) will publishers incorporate new conceptualisations in texts. Thus, textbooks mirror teachers’ understandings, help shape conceptualisations, and follow rather than lead educational trends.

The five themes were introduced into textbooks after a long delay; the National Standards are only now appearing, ten years after their introduction. The five themes, the six essential elements, and 18 standards co-exist in varying degrees in US textbooks and classrooms. Although this blending of conceptualisations is not an ideal situation (it would improve the rigour of the geography curriculum if the Standards were adhered to more carefully), it is an improvement over pre-*Guidelines* days when geography for too many social studies teachers consisted of teaching place names. However, it may still be just that in too many US classrooms.

Teaching Geography

There is little empirical research describing the ways geography is taught. Although some research describing innovative curricular practices exists (see for example, Dorn et al., 2005), no systematic survey of geography instructional methodologies, assessment strategies, or common classroom activities has been published. In addition, while states and school districts may require what is taught, they rarely, if ever, have expectations or guidelines about how to teach. Increasingly, student performance on high-stakes assessments hold teachers accountable, but external review mechanisms to monitor the nature and quality of classroom interactions are weak or non-existent. Anecdotally teachers describe geography practice as tremendously varied, ranging from exemplary, enquiry-based, and learner-centered to cut-and-dry, drill-and-kill, and teacher-centered. Because few social studies teachers who teach geography courses have deep comprehensive knowledge of the subject, they may be unable or uninterested in utilising innovative, up-to-date methods. Shulman (1989) suggests that to be effective, educators must apply three types of knowledge in their classrooms content knowledge (knowing what to teach), pedagogical knowledge (knowing how to teach), and content pedagogical knowledge (knowing how to teach particular content). Teachers with limited geographic knowledge will have a difficult time teaching the subject expertly.

A SWOT Analysis

SWOT analysis is a strategic planning tool frequently used to evaluate organisations or to develop marketing plans. It can be applied here to assess geography education's current strengths, weaknesses, and opportunities as well as threats to its continued health.

Strengths

Contemporary school geography has four primary strengths. The long-term support of a national organisation with considerable social and political clout, the National Geographic Society, has always been a point of strength for US geography education. After a period in which that organisation reconsidered its mission and methods, monetary support for state Alliances has resumed. The funding is expected to revitalise grassroots-level professional development programmes vital to creating and nurturing a knowledgeable teaching force. As a result of the National Geographic Society's re-commitment to geography education, a major national public relations campaign promoting geography is planned (see Opportunities). A second bastion of US geography is an outcome of NGS's Alliances a large and committed army of 'geo-evangelist' teachers. These Alliance teachers promote geography, organise conferences, involve their students in geography-based special projects, and teach the subject with greater enthusiasm and success than non-Alliance teachers (Mid-Continent Research for Education and Learning 2002). A third strength of US geography education lies in its coordinated governance through the Geography Education National Implementation

Project (GENIP). GENIP is a steering committee that co-ordinates the education outreach efforts of the four US professional associations (NGS, AAG, AGS, and NCGE). It serves as a single point of contact to the geography education community for external groups such as federal agencies and helps to present geography as an entity speaking with a unified voice. A final strength is the increasing public concern about America's position in a highly competitive, interconnected global system – and US students' lack of a global perspective. There is a growing awareness on the part of a small but vocal elite that too many Americans are ignorant about the world. This point of view is illustrated by a quote from former Secretary of State Colin Powell "To solve most of the major problems facing our country today – from wiping out terrorism to minimizing global environmental problems to eliminating the scourge of AIDS – will require every young person to learn more about other regions, cultures, and languages" (Powell, 2004). NGOs like the Asia Society, the Bill and Melinda Gates Foundation, and others are beginning to invest in internationalising US education. However, this strength (and opportunity) is also a weakness.

Weaknesses

Geography's primary weakness is that it lacks a well-defined public image or definition. Few Americans know what geography is, let alone its importance to a well-educated electorate or how studying geography can contribute to solving the problems such as those outlined by Powell. The discipline does not elicit powerful positive associations for people; in fact, it often calls up negative memories – memorising place locations or dreary lessons on the principal products of Peru. The campaign to support the value of geography and to institutionalise it in the curriculum is difficult when the vast majority of policy makers are unfamiliar with the subject and do not believe it serves any real purpose (Bales, 2004). This fundamental weakness is frustrating because there is so little that geography educators can do to affect general perception. Geography is a small discipline; geography educators are an even smaller number. Size is a weakness because there are simply insufficient numbers to do all the work that needs to be done, from research to dissemination to serving as readers on the Advanced Placement Human Geography examination. We may lack the mass critical to ramp up.

As a result of these problems, geography has struggled, sometimes successfully and sometimes not, to establish and maintain a place in the curriculum. Geography's position in the social studies, not as an independent subject, is clearly a weakness (although its designation as a core subject independent of the social studies is a strength). The struggle for time in a crowded curriculum is continuous. Recent federal legislation, known as No Child Left Behind (NCLB), requires high-stakes assessments in mathematics, reading, and science but not social studies, let alone geography. As a consequence of the emphasis on reading and mathematics resulting from these new tests, 29 per cent of elementary school principals and 27 per cent of US school districts report a decrease in the time spent on social studies including civics and geography (Council for Basic Education, 2004; Center for Education Policy, 2005). So while

geography is competing for time within social studies, social studies itself is losing curricular status.

These problems are exacerbated by a fourth, and perhaps most important, weakness – teacher preparation. Teacher preparation is considered the *bête noire* of geography education in the United States (Boehm, Brierley & Sharma, 1994). Few US teachers have formal training in geography. Educators who self-identify as geography teachers make up 8.84 per cent of all social studies teachers (National Geographic Society, 2005). Only about seven per cent of elementary teachers have any formal geography training (Weiss et al., 2002). With the growth of geography in the last twenty years, the need for highly qualified geography teachers has grown. Unfortunately, teacher preparation programmes have failed to produce a supply of adequately trained geography teachers capable of implementing the innovations of the past two decades (Bednarz, Stoltman & Lee, 2004). Changes in how US teachers are prepared may lead to further difficulties in producing geography-literate teachers. These four weaknesses – lack of accurate public image, small size, tenuous position in the curriculum, and inadequately-trained geography specialist teachers – reinforce each other in a vicious cycle.

Threats

We have already discussed four significant threats to geography in previous contexts but they bear repeating. The first threat to geography comes from its position within the social studies, an interdisciplinary domain dominated by history. The struggle for time in the curriculum between history and geography threatens geography's existence. Interestingly this threat has taken on new meaning as the social studies itself has come under attack by conservative scholars who would like to see social studies replaced by history (Leming, Ellington & Porter, 2003; Evans, 2004; Thornton, 2005). A second threat arises from NCLB. This ground-breaking legislation confirmed geography's status as a core subject but provided no funding for geography education, emphatically confirming geography's low status among the core subjects. NCLB's emphasis on mathematics, reading, and science has forced geography educators to recast our subject matter in the context of these subjects to see any class time for geography (see Dorn's account of Arizona's efforts below). All of this has occurred with little outcry from a public unsure of the value of geography to the general populace. The biggest threat to geography education might be that there are just not enough people who care about it to fight for its existence.

Opportunities

At the same time that geography education is plagued by significant weaknesses and threats, it is also blessed with opportunities. The growth of geospatial technologies and related activities provides a tremendous opportunity for geography to create a clear and persuasive image of itself as an essential contributor in these areas. Students (and their parents) who play with Google Earth, who download location-based services

including maps on their cell phones, and use a GPS for recreation may recognise the importance of geography to the very foundation of geospatial technologies such as geographical information systems (GIS), global positioning systems (GPS), and remote sensing (RS). Making a strong connection between technology, geography, and careers will have a positive impact on geography's curricular status.

An opportunity related to this lies in spatial thinking, an emerging area of research and interest among geographers, geographic information scientists, cognitive scientists, and psychologists. Spatial thinking, defined as the knowledge, skills, and habits to use concepts of space, tools of representation, and processes of reasoning to structure problems, find answers, and express solutions, was the focus of a prestigious National Academy of Sciences study. The long-awaited report promises to examine the importance of spatial thinking for learning and doing geography as well as other sciences such as mathematics, and it should help to re-position geography as a core competency rather than a peripheral add-on to the curriculum.

Another opportunity, which could also be categorised as a strength, is the introduction and growth of a course in Human Geography in the prestigious Advanced Placement (AP) program. It provides students in states and school districts that have no high school course with the opportunity for an advanced-level learning experience. The course, taught in high schools for college credit, is compelling teachers to acquire more formal training in, and giving students an introduction to a sophisticated and rigorous study of, geography. Although anecdotal, initial reports are that this course is having a positive effect on college geography enrollments.

Finally, two related initiatives of the National Geographic Society offer geography education tremendous opportunities the introduction of federal legislation, *The Teaching Geography is Fundamental Act* in summer 2005, and a public engagement campaign entitled *My Wonderful World*. The proposed legislation states unequivocally the importance of geographic literacy and requests \$15 million to support geography education. If enacted, it will provide the resources needed to address many of the previously mentioned weaknesses and threats. The public engagement effort, targeted at influential parents and policy makers, including teachers, is designed to re-define geography education for Americans in order to build public consensus concerning its importance and value. These two programmes are planned to complement each other, and US geography educators will work to support both.

Summary

This section began with a description of geography's development, its position in the curriculum today, and the changing conceptualisations of geography. Next, the current state of geography instruction and efforts to improve its practice were described. A SWOT analysis identified school geography's prospects. This section concludes with a few observations about the connections between school geography and the discipline of geography.

Two aspects of academic geography are largely absent from US school geography geospatial technologies and post-positivist scholarship. GIS has achieved only

limited implementation in US geography classrooms. The reasons for this are complex (Bednarz & van der Schee, forthcoming; Kerski, 2003) and discouraging to geographers who see this as an opportunity for geography education. We would not like to see students become mindless users of GIS but feel that some infusion of GIS scholarship and technical skills would benefit geography education. Post-positivist scholarship is even more absent from US school geography. This is striking in comparison to the gradual infusion of humanist perspectives in English school geography as advocated and illustrated by Morgan and Lambert (2005). In the US context, Warf (2004, p. 50) observed, "Geography education has remained largely isolated from the contemporary currents of the discipline, to their mutual detriment. If geographers are to build a discipline that engages the public imagination and ruptures the "capes and bays" stereotype under which it still labors, then devoting time and energy to first class pedagogy should become a high priority." We agree but note that this is not the first geographic epistemology that has failed to be included in school geography. For example, the preceding 'quantitative revolution' had almost no impact on pre-collegiate books, courses, or curricula.

ARIZONA

RONALD DORN

Arizona is the second fastest growing state behind Nevada. With a Hispanic population of about 30 per cent and growing dramatically, Arizona will soon join Texas and California as having no ethnic majority. Over 40 per cent of the school population receives free or reduced lunch, indicating the low income of much of the school-age population. Over 20 per cent of Arizona's students now have English Language Learner status, with most of these speaking Spanish as their birth language. Spending per pupil remains near the bottom of U.S. states at a little more than \$4000. Approximately 2,400 individual schools in Arizona are run locally by 225 unified (K–12) and non-unified (either K–8, or 9–12) districts and charter schools that are responsible for teaching and testing a curriculum based on state-mandated standards.

September 2005 saw the adoption of a new set of Arizona Social Studies Standards, where geography exists as one of four major core disciplines along with civics, economics, and history. Little beyond place-name geography was taught in Arizona classrooms prior to adoption of standards. These standards were written with the assistance of Arizona Geographic Alliance teacher consultants, university professors, teachers selected by the Arizona Department of Education, and the author of this chapter serving as a vital outside reviewer. The 2005 standards replace a roughly similar set of year 2000 standards.

The fate of geography in Arizona changed in 1992 when Arizona State University Professors Malcolm Comeaux and Robert Mings and a handful of geography teachers joined the National Geographic Society alliance movement. This grassroots organisation grew by training over 200 teacher consultants who then went on to train colleagues in their districts and schools. The organisation now hosts over 3,050 members scattered

across the state. Run by approximately 150 active teacher consultants, the Arizona Geographic Alliance undertakes projects envisioned by the teachers. The teacher consultants also serve as members of other Arizona social studies organisations, creating a web of mutual support and co-running teacher training activities with the Arizona Council for Social Studies, the Arizona Council for Economic Education, and other organisations. Upon the retirement of Professor Comeaux, veteran teacher Gale Ekiss took over as co-coordinator. She has added an emphasis on articulation to reading, writing and mathematics and workshops focusing on disadvantaged urban and rural schools; these teacher training activities have impacted on more than 140,000 K–12 students in the last three years.

Major Arizona geography projects include

- an annual GeoFest conference and bi-annual summer geography institute where Arizona teachers learn about geography, including such national packages as NASA Mission Geography (missiongeography.org) and ARGWorld (www.aag.org);
- a set of maps developed by Arizona State University cartographer Barbara Trapido-Lurie where the maps are a collaborative effort with student interns and teacher consultants (see <http://www.alliance.la.asu.edu/azga/> and click on maps);
- a searchable lesson engine (see <http://www.alliance.la.asu.edu/azga/> and click on lessons);
- the articulation of geography with the No Child Left Behind federal legislation. This articulation includes language arts in a “GeoLiteracy” package (<http://alliance.la.asu.edu/geoliteracy/general.html>) and a “GeoMath” package (<http://alliance.la.asu.edu/geomath/general.html>). Each set of more than 80 lessons links geography with reading, writing, or math skills emphasised on Arizona’s Instrument to Measure Standards, Arizona’s ‘high stakes test’. This articulation, supported by National Geographic Society Grosvenor grants and the Arizona Department of Education, includes research on the efficacy of these programmes to increase mathematics skills in Arizona. A research project still ongoing with the Michigan Geographic Alliance assesses changes in reading comprehension skills when GeoLiteracy lessons are taught in a variety of elementary school settings in Michigan and Arizona. Preliminary results of analyses of more than 2,000 students in controlled trials indicates that statistically significant improvement takes place in reading comprehension in grades 4–7 (Hinde et al., in preparation);
- A greater emphasis on pre-service teacher training through an internet course where students watch streaming video tapes of best practices of Arizona's teacher consultants; and
- The newest focus rests with the three-year goal of adapting and doing efficacy testing on geography lessons (GeoLiteracy and GeoMath) that are modified for English Language Learners (ELL). Surveys and focus group discussions reveal a crisis for social studies teachers, where textbooks are inadequate tools to reach students with limited English skills. The goal of this new focus is to provide social

studies teachers with a full set of parallel materials for English-proficient and ELL students, where this curriculum links standards-based geography to the high-stakes testing of reading, writing and mathematics.

TWO DECADES OF GEOGRAPHICAL EDUCATION IN MICHIGAN; FROM NOWHERE TO SOMEWHERE AND ON INTO THE UNKNOWN

MICHAEL LIBBEE

In Michigan, over the past twenty years, the status and curriculum position of K–12 geography has changed significantly. The past changes and current movement have been influenced by changes at the national, state, and individual level, and provide a case study of curricular change in education.

Nowhere – Nothing but Potential

In the mid-1980s, geography was essentially nowhere in Michigan. The state curriculum specified a fairly standard western hemisphere eastern hemisphere sequence, Geography could also be part of a high school global issues course, and integrated into a fairly standard expanding environments social studies curriculum in grades 3–5. While the curriculum, school, and teachers were not hostile to geography, nothing systematic was happening.

Several factors, however, set the stage for an increased role for geography. First, the report *A Nation at Risk* (1983) set the stage for a stronger emphasis on disciplinary courses in middle and high school. Secondly, anticipating No Child Left Behind, the state's mathematicians launched a successful drive to limit all subjects elementary certification to grades K–5, and to grades 6–8 only when taught in a self-contained classroom where a majority of teaching was done by the same teacher. In most middle school situations, teachers are certified only in the areas of their major and minor. (Michigan requires an elementary teacher to have a major and a minor or two minors in content areas.) Thirdly, the geography community in Michigan was fairly coherent, with a strong interest in geography education and congenial relationships with the rest of the social studies community and with the Michigan Department of Education. Lastly, the National Geographic Society was getting into the K–12 education arena, and developing a network of state alliances. The Michigan Geographic Alliance was established in 1989 after two years as a 'planning' state.

Phase 1 Creating a Problem Systemic Change and the Nation's Education Goals

The National Geographic Society used their media power to make geographic illiteracy a widely perceived problem. The Gallup pole in 1988, inclusion in the National Education Goals, and the NAEP assessment in 1990 all led to greatly enhanced public awareness. If the National Geographic Society created a widely perceived problem, (and helped include geography in the Nation's Education Goals as part of the solution), then solving the problem was largely the job of state-based organisations.

In the initial years, the primary role of the Michigan Geographic Alliance was to develop a network of teacher consultants and provide high quality workshops around the state. The Michigan Alliance learned what worked in workshops with teachers, how to help experienced teachers become experienced teacher trainers, and developed a strong cadre of teacher consultants, and built credibility within the state. While the phrase was never used at the time, the initial years were essentially capacity building – creating a structure that could respond to unforeseen events – and that structure earned geography a place at the table making significant system-wide changes.

Phase 2 The Institution Solution Working to Integrate Geography into the Institutional Fabric of K–12 Education in Michigan

Social movements create social problems – bureaucracies try to provide solutions. Public awareness led to the Nations' Education Goals, and development of *Geography for Life*. Michigan developed a state geography framework, along with content standards, grade cluster benchmarks and assessment, and made changes in state certification requirements. In all the areas, geography enthusiasts essentially worked to place geography on an equal footing with history, civics and economics. Geography became one of four discipline-based content strands in the state content standards, (along with the three cross-cutting standards of enquiry, public discourse and decision-making, and citizen involvement). In social studies certification students must take a minimum of six hours in each of the four core disciplines. In testing, each discipline has the same number of questions. By fighting for equality among the four core disciplines, geography presented a position that was both intellectually valid and gained allies.

Phase 3 Supporting Teachers and Enhancing Student Achievement You Expect 100,000 Teenagers to do What?

The development of a state social studies assessment for grades 5, 8 and 11 was the culmination of a full decade of work, and was the primary driver of systemic change, especially in middle school and high school.

The Michigan social studies assessment incorporated several important elements. Each discipline had two sets of five questions organised around a prompt. Students had to get information from the prompt and use social studies knowledge and concepts to get the answer. The test included open-ended questions dealing with information processing, such as draw a graph from data and interpret the results; and two (eventually one) essay questions in which students had to write a letter to the editor or a letter to a legislator taking a position on a public policy issue and support their position using data from a data set; a core democratic value; and other social studies information. The key issue was that the test evaluated specific skills and knowledge that was valuable, understandable to parents and teachers, and teachable.

The most effective work the Michigan Geographic Alliance and the rest of the social studies outreach community did was to help teachers enhance student achievement as

measured on the social studies assessment. The amount learned was interesting and unexpected. Students were good at making graphs and poor at saying that they meant. Students quickly learned how to apply core democratic values, and struggled with learning how to use information to support a position. Perhaps the most important lesson, learned from the Michigan Assessment Project's work with 25,000 students and several hundred teachers, was that relatively focused professional development activities and work with teachers could indeed enhance student achievement as measured by an independently administered state social studies assessment.

Phase 4 Into the Unknown – Presidents, Budgets and Change

The bipartisan coalition of two successive presidents and the nation's governors held together through the first Bush administration and the Clinton administration. Unfortunately, social studies momentum was slowed by No Child Left Behind's focus on reading and mathematics and the poorest twenty per cent of the population, coupled with a more challenging economic situation. Still, the future is not grim. While interest in strengthening geography has a lower priority in elementary schools, ensuring that middle and high school teachers are 'highly qualified' has a higher priority. While the state assessment is changing, the four core disciplines are working together to maintain a strong presence for all. While the cycle of education reform favours other worthy disciplines, geography in Michigan is far better than it was two decades ago, and our time will come again. We have all made progress, there is still plenty of work to be done.

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MARGARET ROBERTSON & PHILIPPA FERGUSON

GEOGRAPHY IN AUSTRALASIA

The geo-political scene in Australasia is one of complexity and diversity. While there are similarities in their curriculum histories the national priorities and political arrangements of these two separate nations makes for differences that require separate consideration. Hence, this chapter is presented in four parts. In the first part Margaret Robertson presents an introductory overview of the more generic curriculum issues that allow for generalised comment within the region. This is followed by an overview of the Australian context, past present and future. In the third section Philippa Ferguson scopes out the New Zealand scene regarding the place of geography in secondary education. In the final section some comment is made on possible future directions.

OVERVIEW

MARGARET ROBERTSON

It needs to be understood that in Australia and New Zealand the curriculum heritage for geographic education is embedded in the social studies tradition associated with the USA. In the post-World War 2 period the separate disciplines of geography and history have fought to maintain their status within a contested space and debate regarding the meaning of social education. In the early days of this curriculum shift the core disciplines of history and geography were clearly defined. Teaching social studies in both primary and secondary schools involved content sections that teachers and learners recognised and labelled history and geography. For students who were attracted to these disciplines the upper secondary courses provided specialist courses in geography, modern and ancient history as the precursor for tertiary studies where the traditional disciplines retained (and still do) their academic separateness. Following the USA curriculum change directions, the first wave of new thinking came with the advent of what Fenton called the 'new social studies' (1966). This reinterpretation of the social sciences placed emphasis on enquiry-based learning and became widely used in teacher education programmes. The new generation of curriculum advisors became the advocates of the 'new' social studies and politicised an integrated curriculum approach. Their 'contemporary' thinking emphasised process in learning and encouraged in learners the skills of co-operation, debate and discourse that were viewed as key contributors to the creation of nations of independent, self-reliant learners.

Within this socio-political education context the separate disciplines entered a competitive arena. Marsh (2001) describes this time as a process of redefining what we mean by the 'cultural transmission' approach with its emphasis on the traditional disciplines of history and geography to consideration of the process elements or 'structure of the disciplines' (5). He states "An important outcome of this approach was that it moved attention away from history and geography as the exclusive sources of knowledge of studies of society and environment (formerly 'social studies') and included other disciplines such as sociology, anthropology, economics and political science" (5–6). Textbooks for teaching the newly defined curriculum reflected these directions (Marsh, 1994; Gilbert, 1996), and proponents of separate disciplines were labelled conservative (Smith, 1986).

Smith made some strong observations at the time (1980s) which in the context of events that have followed are worthy of reflection. He maintained that support for the traditional disciplines of history and geography reflected a socio-political agenda that favoured traditional ways of knowing linked with socially transmitted values and beliefs. In both Australia and New Zealand the politics of the mid-1970s and early 1980s were marked by a shift towards the left with the then ruling Labour parties embracing social justice for all and major spending on educational reforms designed to be educationally inclusive and providing pathways to success for all learners – not just the intellectually and well endowed elite few. Schools were urged to conduct curriculum reforms that would provide courses to encourage adolescents to remain in school beyond the compulsory school exit age and seek further pathways into higher education. This was the beginning of an era that has drawn content from popular culture particularly the mass media. This shift to lifelong enduring education for all resulted in structural and ideological reforms in education that have persisted. Few would disagree with this more equalitarian approach to education. However, with hindsight there appears to have been a cost in terms of what some are now referring to as a 'dumbing' down of the curriculum.

Politically the two nations have taken different pathways throughout this process of change; although at national levels both appear to be setting similar education targets to prepare their respective nations for the future. New Zealand has a national curriculum and national accreditation process with localised governance through school-based education authorities and local school boards. In Australia, a federal system operates where states and territory governments are responsible for delivering education. All Australian states have separate delivery arrangements and curriculum statements. This practice of all powerful states and territories systems administering education within Australia makes for a somewhat messy situation with limited transferability across borders. The states fiercely protect their curriculum statements against perceived federal government 'interference'. The one threat that the federal government can use for states to agree is funding. Federally collected, the dispersal of money to the states for education (and health) has in recent times been linked to targets for learning and curriculum outcomes (especially for literacy and numeracy). Increasingly, a feature of this targeted funding approach has been a requirement for states to report on related learning outcomes. In itself this has announced a new

form of conservatism and backlash against proponents of constructivist curriculum approaches. This observation is expanded in more detail in the final section of this chapter.

The Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA)

Formed in 1993, The Ministerial Council on Education, Employment, Training and Youth Affairs brought together Ministers of Education from all states and territories with the Australian Federal government and New Zealand Ministers of Education. The role of this body has been to set the agenda for policy change in education to accommodate changing societal needs. Perhaps the most important development of that powerful group has been *The Adelaide Declaration on National Goals for Schooling in the Twenty-first Century* (1999). The resultant ‘agreed and common goals’ have shaped educational thinking in the ensuing years.

The declaration states (www.curriculum.edu.au/mceetya/public/public.htm#national accessed on July 20, 2005)

“students should have comprehensive and balanced curriculum in the compulsory years of schooling encompassing the agreed eight key learning areas

- the arts;
- English;
- health and physical education;
- languages other than English;
- mathematics;
- science;
- studies of society and environment;
- technology;

and the interrelationships between them”

The national curriculum profiles referred to can also be traced to the 1989 National and Agreed Goals statement which state of curriculum www.curriculum.edu.au/mceetya/public/public.htm#national (Accessed on June 5, 2005).

The announcement of key learning or knowledge strands directly affected geographical education. In the Australian context, the relevant knowledge strand identified was named Studies of Society and Environment. Consisting of six knowledge strands, geography is most closely aligned to the *Place and Space* strand. While in New Zealand the national curriculum response retained the name of Social Studies, similar strands of knowledge were identified and likewise *Place and Space* has become synonymous with of geography. In primary and lower secondary schools these courses have become part of the core curriculum, also known as ‘essential learnings’. Only in years 11 and 12 are there discipline-specific options that include history and geography. As discussed below the exception is in New South Wales where history and geography are mandatory subjects in years 7–10.

In New Zealand, the national curriculum statement asserts

In New Zealand schools, social studies programmes emphasise learning about New Zealand peoples, cultures, and groups in various time and place settings. Such learning includes the development of understandings of the Treaty of Waitangi, of New Zealand's bicultural heritage, and of the multicultural nature of our society. (<http://www.minedu.govt.nz/index.cfm?layout=document&documentid=3523&indexid=1005&indexparentid=1004> (Accessed on July 20, 2005).

In the Australian statement on national goals for Studies of Society and Environment similar emphasis is placed on its first nations' people. The statement reads

all students understand and acknowledge the value of Aboriginal and Torres Strait Islander cultures to Australian society and possess the knowledge, skills and understanding to contribute to and benefit from, reconciliation between Indigenous and non-indigenous Australians. (<http://www.mceetya.edu.au/nationalgoals/natgoals.htm> (Accessed on October 28, 2005).

In both statements there is acknowledgement of the diverse nature of the populations and just recognition, perhaps for the first time, of the heritage that each nation has inherited from their early occupants. The wrongs of earlier teaching materials that labelled history as commencing with European occupation are corrected and emphasis is placed on building collaborative futures that fully recognise the rights of all cultures to co-exist. Tolerance and understanding are part of the rhetoric that underpins the detail in the respective curriculum statements.

So where does geography education 'sit' within all these ongoing curriculum developments? It seems a reasonable assessment of the situation to state that amid these changes the survival of geographical education has been severely tested. Its resilience within the curriculum frameworks of Australian states has been greatest within the non-government sector where it could be argued that the conservative wing of academic elitism is strongest and where the financial power of the schools is sufficient to maintain an independence albeit within a predominantly religiously linked context. However, geographical education appears to have become increasingly marginalised within the public education sector. Declining numbers of pre-tertiary enrolments are one of the indicators of dwindling interest with the dominance of studies of society and environment along with the growth of new courses in the late 1980s in environmental studies and more recently 'new' disciplines such as civics, media studies, and tourism studies.

In brief, the Adelaide Declaration has wielded a powerful influence over public education within the two nations. The overhaul was needed. However, the process of implementation that has followed throughout the states, territories and local education authorities has recently led to serious public debate about the efficacy of the learning outcomes and a call for much tighter controls on what schools teach. Returning to discipline-based learning remains one of the tightening ropes that refuses to go away. Thankfully for the future of geographical education this provides some hope for a renaissance of sorts.

On the theme of Geography in Australasia, a published contribution to the Forum section of *International Research in Geographical and Environmental Education* titled 'Does Geographic Education need a spin doctor?', Robertson (2003a) argues

that to a lesser or greater extent geographical educators within Australia have not seized the opportunities as well as they might. In 2005 this question remains central to any comment on geographical education within the region. Within a current climate of curriculum reforms in Australia and New Zealand opportunities are many. These systems-wide reforms are providing directions for future education that reflect societal change and directions. The rhetoric includes statements about ‘world futures’, ‘sustainable lifestyles’, ‘health and well being’, ‘information technologies’ and ‘citizenship’, all of which offer rich possibilities for contributions from geographical education.

In the following two sections some of these emerging issues are considered first in the Australian context and secondly in the context of secondary education in New Zealand. Included are some glimmers of optimism that events may lead to changing fortunes for the future of geography as an acknowledged and specific knowledge discipline for education.

AUSTRALIA

MARGARET ROBERTSON

The entrenched culture of Studies of Society and Environment (SOSE) within all states and territories largely results in the teaching of geographical concepts as a function of teacher skill and interest – including such fundamental skills as mapping. Particularly in primary schools, funding targeted to literacy and numeracy outcomes has deflected the attention of many of the nation’s pre-service teacher training programmes away from the importance of the social and physical sciences and the arts. Additional curriculum demands in pre-service teacher training courses that relate to behaviour management, health and well being, among other new content requisites, help compound the ‘neglect’. Along with these competing demands for a slice of the time available in pre-service teacher training programmes has been a continuing diminution of teacher capacity to teach geography. Mapping skills, general world knowledge and curiosity to learn and know more about other peoples and places comes more often through courses in SOSE, LOTE (teaching languages other than English) where some knowledge is gained but geographical concepts not guaranteed. The largest state, New South Wales, provides the national exception where geography remains a mandatory subject in the 7–10 years and is clearly part of the intended outcomes of the K–6 course SOSE equivalent titled *Human Society and its Environment*. Nevertheless, there is evidence of dwindling numbers taking the pre-tertiary version of geography in years 11 and 12 which in turn provides a pathway to tertiary studies.

In recent years the debate on curriculum content has taken on a new dimension with a push by states for reforms that bring the perceived needs of relevance for learning outcomes to the foreground. The debate has placed the pro-discipline proponents even further at odds with the mainstream voice. For instance, in the state of Queensland the new curriculum is termed the ‘New Basics’ (www.education.qld.gov.au/corporate/newbasics Accessed on October 30, 2005).

This curriculum is built around five pillars

- (1) The Pedagogy Premise.
- (2) The Futures Premise.
- (3) The Equity Premise.
- (4) The Research Premise.
- (5) The Professional Learning Community Premise.

To achieve pedagogical change to meet the needs of increasing numbers of disenfranchised learners, the curriculum emphasises pedagogical responses built on the Vygotskian principles of scaffolding learning and enabling learners themselves to make the connections to their personal worlds through 'rich task' assessment.

The next state to enter this new age of curriculum reform has been Tasmania where the curriculum statement is simply labelled *Essential Learnings* (www.education.tas.gov.au/ocll/publications/default.htm Accessed on October 15, 2005). Its pillars are a set of values and purposes that underpin *Essential Learnings* in

- Communication;
- Social responsibility;
- Personal futures;
- World futures, and linked by; and
- Thinking.

The *Essential Learnings* framework purports to

- Reduce problems of a crowded curriculum;
- Engage learners more deeply in their thinking;
- Make learning more relevant;
- Improve learning across all areas;
- Develop higher order thinking skills; and
- Support the transfer of learning.

(Tasmanian Department of Education, 2002, p. 4)

The framework has been cited both within the Australian context and overseas as perhaps the most radical response to date for curriculum reform to meet the challenges of the changing global society. As a framework, the documents have received widespread recognition for setting a new benchmark for change and providing much needed leadership for educating the next generation. There is cautious acceptance within the educational community that the framework is heading in the 'right direction'. At the same time its critics are being extremely vocal with an ongoing media debate that appears to ridicule the language being used as lacking definition and making it difficult for stakeholders (including parents) to interpret. Teachers also struggle with the changes as they work to meet the reporting and assessment targets. The result has been a federal government backlash requiring 'plain writing report cards'.

Amid this turbulent curriculum environment the disciplines have been challenged to defend their positions. Some would argue that this has provided a necessary wake-up call for the traditional disciplines to defend publicly their relevance in the education of a modern society (Robertson, 1996, 2003a, 2003b). In this regard historians have

been quite successful in reinventing a future linked to the growing interest in national identity. However, it is also possible to link this revival of history to federal government leadership and targeted funding – both seemingly necessary prerequisites for effective change in public perceptions and attitudes. For instance, in 1999 the Commonwealth Department of Education Training and Youth Affairs (DETYA) funded a national enquiry into school history (www.dest.gov.au/sectors/school_education/publications_resources/national_inquiry_into_school_history. Accessed on September 29 2005). Associated funding has spearheaded several significant outcomes including the bringing together of key stakeholders from universities, schools and professional associations. A notable outcome has been a growth of interest in history courses within universities and an attraction of new sources of research funds to nurture this renewal process of capacity building.

While historians are currently moving along this new path to relevance in the contemporary education context, geographers have been slow to respond. No such equivalent federal government enquiry exists for geography. Nevertheless, there are mainstream community changes that do provide cause for an optimistic future. On this note Robertson (2003a, p. 57) observed

The 'doing' of geography in this nation is happening all the time. The problem is that the word does not connect in the policy documents or minds of people (and teachers it seems) in ways that will embed the discipline in centre-stage of schooling. There is a crying need for academic geographers and teacher educators to become involved where the action is now located – to recognise funding realities and targets, to work with these guidelines and with colleagues to get the agendas into the mainstream of politics.

This call for action by geographers is now being given impetus from an unlikely source – the public! With the mainstreaming of geographical information systems (GIS) through global positioning systems increasingly becoming a feature of cars, boats and leisure activities such as orienteering and outdoor education, renewed attention has started to emerge on the role that geography can play in the school curriculum. However, arguably, by far the single most important popular culture push is coming from the arrival in the living rooms of internet-linked homes of Google Earth. As a free download for computers this source of information is fascinating the general public. Being able to locate the homes of friends and relatives around the globe helps raise the profile of maps and mapping to a new level of relevance. Schools may be forced to respond.

Personal computers, including GPS software and linked to the internet and including phone connections, are considered to be the next generation fully integrated mobile device. As with many other nations, Australians are showing a preference for personal mobile devices with a noted downturn in land lines (Australian Bureau of Statistics, 2005). Building sustainable lifestyles in the community depends on reliable communications and personal connectivity is viewed as an integral part of current and future lifestyles. These directions in the community are throwing a lifeline for Australian geography in schools which can be spearheaded by appropriate responses in pre-service teacher training courses. These changes towards relevant capacity building are beginning to appear. Some of the leadership and sponsorship of relevant

technological change is taking place with the assistance of the Australian Geography Teachers' Association (www.agta.asn.au Accessed on October 29, 2005). Other push factors are the national and states' priorities for mainstreaming the integration of Information and Communications Technologies in learning.

Interestingly, the most recent state to publicise its 'new' curriculum is Victoria. The Victorian Essential Learnings adopts a middle road between the *avant-garde* approach of Tasmania and Queensland as opposed to the conservatism of New South Wales. The relevant curriculum statement is "The *Victorian Essential Learning Standards*. *identify* three core and interrelated strands for the Prep to Year 10 curriculum" (www.vels.vcaa.vic.edu.au/essential/index.html Accessed on October 20, 2005). The three strands for the new curriculum and their associated domains are

- Physical, personal and social learning;
- Discipline based learning – which includes geography;
- interdisciplinary based learning – including 'thinking', 'communicating' or similar themes as found in the Tasmanian and Queensland curriculum statements.

This Victorian position combines the disciplines with the new thinking and goes even further to exclude Studies of Society and Environment. 'Humanities' is the overarching context for the traditional disciplines including geography, history and economics.

In brief, there are hopeful signs of a community push for curriculum renewal in the states and territories of Australia for the traditional social science disciplines of which geography is one. The success of this public push will largely depend on the readiness of existing geographical educators and their successors to respond in ways that are responsive to a changed world, where knowledge *per se* is not an end in itself but where the skills of spatial awareness and application of spatial analysis have a critical role to play for our future survival.

NEW ZEALAND

PHILIPPA FERGUSON

The New Zealand Curriculum is presently undergoing review. In 2002 the Curriculum Stocktake Report was completed. Its purpose was to analyse and evaluate the reforms that had taken place in the early 1990s when there had been a major shift from a focus on content to a policy based on outcomes. Since that time, curriculum statements have progressively replaced syllabi. The report was presented to Cabinet in early 2003. In May 2003 the Ministry of Education initiated the New Zealand Curriculum Project that was set the task to implement the recommendations made in the Stocktake Report. The key messages were to reduce, refine, and revitalise the current curriculum.

The Curriculum Stocktake report identified the following themes as important considerations for curriculum development in New Zealand.

- Social cohesion;
- Citizenship;

- Education for a sustainable future;
- Bicultural and multicultural awareness;
- Enterprise and innovation; and
- Critical literacy.

It recommended that there be eight essential learning areas and that modifications be in keeping with existing frameworks.

Social studies will continue to be one of the essential learning areas as it is now, however, it is proposed to change the name to social sciences in the New Zealand curriculum. Social studies is taught from Years 1 to 10. Geographic concepts are integrated into the social science curriculum and a more interdisciplinary approach to this learning area is taken. Geographic concepts are clearly identifiable within two of the five strands. Students gain knowledge and understanding of places in Aotearoa/New Zealand, through examining the importance and significance of place, places influence on people, people's influence on places, movement of people between places and the consequences of this. Also students gain knowledge and understanding about different resources people use, the management of these resources, the various ways in which resources are perceived and used.

In Years 11 to 13 students study geography as a stand alone discipline that provides a pathway to further study at tertiary level. Delivery is based on the 1990 syllabus that is a mix of knowledge, skills and geographical ideas. The Prescribed Common Topics are externally assessed with topics such as Extreme Natural Events, Population, Resources and their Use studied at Year 11. Natural Landscapes, Urban Settlements, and Inequalities in Development studied at Year 12. At Year 13, studies involve a mix of physical focusing on Natural Processes and cultural, focusing on Cultural Processes such as migration and tourism development and the Role of Geography in Planning and Decision making. The school based studies are internally assessed. In these there is some scope for choice and flexibility, when planning programmes for research, issues and global studies.

During the 1990s a shift in assessment methodology took place. Aware of upcoming changes in assessment the New Zealand Geographical Society (NZGS) and the New Zealand Board of Geography Teachers (NZBoGT) in 1999 produced a position paper stating "This position paper has been produced with the primary aim of providing quality advice for the Ministry of Education's new qualification programme "Achievement 2001" (NZBoGT, 1999). The resulting paper was comprehensive, not only evaluating the current syllabus but also examining and identifying the future direction needed for school geography in the new millennium. As stated "The position paper provides a series of clear and important recommendations that will enable the achievement standards to reflect the current geographic approaches and direction needed for school geography in the new millennium" (NZBoGT, 1999).

These were reflected in the new assessment method that involved standards based assessment. Geography like other senior subject areas presented a matrix that gave an excellent overview of the nature of assessment within geography. The new national assessment structure known as NCEA (National Certificate of Educational

Achievement, Levels, 1, 2, 3, and Scholarship) was launched in 2002. This national qualification was acknowledged on the National Qualifications Framework. This meant a student in Year 11 completed assessments at level one, a student in Year 12 completed assessments at level 2 and so on through the levels.

Students measure their level of achievement against various standards and gain credits. These are measured against particular criteria that indicate a student's level of achievement from Achieved to Achieved with Excellence. There has been concern at the narrowing of school programmes as a result of teachers focusing on particular achievement standards in an effort to improve school results. This assessment method also allows for the mix of disciplines at senior level which can impact on senior numbers. There is an approximate mix of 50 per cent internal and 50 per cent external assessment offered. Students have a number of aspects on which they are assessed. Although based on the focusing questions for each topic there have been some minor developments to acknowledge the current geographical approaches and directions.

Fieldwork is still an integral part of the subject with fieldtrips of both a physical and cultural nature being undertaken. Pressure is being created on teachers when school cultures do not support students out of class. Compliance legislation is also imposing its own frustrations as teachers are finding it more difficult and time consuming to meet necessary documentation. At the same time fieldwork does allow teachers to develop their own focus, for example, at Year 13, various natural environments are studied and also schools are able to examine geographical issues pertinent to their own local area.

The development of information and communications technology has had a huge impact on teaching and learning in geography, particularly the introduction of GIS into many secondary schools in New Zealand. Teachers are supported by regular professional development workshop sessions. In 2002 there were about 30 of 400 secondary schools with GIS software, now there would be over 40 schools with the software installed and many more have the free ArcVoyager software or who have been exposed to the software at a presentation. There are two competitions Years 7–10 Community Atlas competition, and for Years 11–13, the LINZ/SSI GIS in Schools competition.

Geography maintains its strong position in the upper secondary school where it is taught as a stand alone subject. In 1990, 365 New Zealand secondary schools taught Geography as a subject, by 2001 there were 368 schools. At Year 11, however, student numbers fell from 20,916 to 12,418 between 1990 and 2004. This figure does represent the largest subject number after English, Mathematics and Science. With more students having success at Level One due to standards based assessment, student numbers at Year 12 are up by almost 1,000 students. The figures for Year 13 showed a slight increase in the total numbers taking geography with 7,511 pupils sitting Bursary geography in 1990, 8,286 in 2001. This has since dropped to 5,936 students entering for one or more achievement standards in 2004.

Presently the final draft for the social science curriculum statement is being finalised. It is proposed that senior subjects such as geography, history and economics have a clear and strong presence in the post-compulsory section of the curriculum

statement. Each discipline is clearly identified and contributes to an individual strand that clearly represents the desired learning outcomes in the senior secondary years as students prepare for tertiary education. The achievement objectives are to reflect the achievement standards providing a clear connection between national curriculum and national assessment.

Change is an integral part of developing and refining. There has been no hesitation by educators in responding to the opportunities offered by the new developments initiated by national government, but, of course, the success of anything new is reliant on the dedication, enthusiasm and vision of the people involved.

FINAL COMMENT

The common themes for geographical education in Australia and New Zealand are curriculum change and new directions for assessment and reporting requirements. As in most OECD countries, there is pressure to compete internationally and face the ongoing challenges of our globalised lifestyles. As relatively small economies our futures rely on smart people. Our next generation is being prepared for this world. However, the role that geographical education can take is still to be decided.

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SZE ONN YEE & GUANG YANG

GEOGRAPHICAL EDUCATION IN EAST ASIA

INTRODUCTION

To reveal the development and current status of geographical education in East Asia¹ is a formidable task as this region comprises countries and places of very sharp variations in economic development level, social trends, and political systems. Japan, for example, enjoys an enviable level of GDP per capita and social stability and is run by a democratically elected government. On the contrary, Vietnam and Cambodia are underdeveloped economically and politically. Despite such contrasting patterns, it would be interesting to try to find out whether there are any commonalities in the teaching of geography in these countries.

In this chapter, first of all, an attempt is made to paint the status of geography in the school curricula of East Asian countries in broad strokes, followed by an analysis of the forces shaping its developmental trend. As a conclusion, there will be speculation on the future of geographical education in the region.

STATUS OF GEOGRAPHY IN THE SCHOOL CURRICULUM

The place of geography in school curricula in most, if not all, countries and places in East Asia has been eroded in the past ten years. In the early 1990s, geography was a compulsory subject in junior secondary level² in places such as Hong Kong, Taiwan, Singapore, Malaysia, and Mainland China. However, geography has slowly been replaced by integrated courses such as integrated humanities (Hong Kong), social studies (Taiwan and Mainland China) and combined humanities (Singapore). Although in these places, with the exception of Taiwan, geography still remains an independent academic subject in schools rather than as an integrated subject, it seems that the encroachment of curriculum integration has started to take its toll.

In places where an integrated curriculum has been in place for a long time, the geography element within these integrated studies has not won any significant advancement in terms of its share in content and teaching time. Japan, Thailand, South Korea, and the Philippines belong to this group.

At primary level, geography, as before, has not been given the status of a separate subject. Instead, geographical knowledge and skills (such as basic map reading skills) are included in integrated subjects such as social studies and general studies. In some cases, geographical knowledge is covered in general science also.

When students reach the senior level, geography is very often an elective subject or a component of the school curriculum. In Japan, for example, the senior secondary curriculum³ is structured in a unit credit manner (Feng, 2004; Wang, 2000). Under this system, students can choose geography as an elective. In Mainland China, all students have to take a core unit of geography and those who have a special interest in this subject have a range of choices. Singapore and Hong Kong share strong similarity in their senior secondary curriculum. A fairly high percentage of students taking the arts stream take geography. However, as the choice of subjects in senior secondary education increases, the percentage of students choosing geography faces a downward trend in Hong Kong. Such a trend is very likely to occur in other parts of East Asia as the basis of geographical education is increasingly eroded by integrated studies at the junior secondary level.

THE RISING IMPORTANCE OF SKILL DEVELOPMENT AND ENQUIRY LEARNING

An analysis of curriculum changes in Japan, Taiwan, Mainland China, Singapore, Hong Kong, Malaysia, and Thailand suggests that there is a move towards enquiry-based type of learning so as to induce skill development, particularly the development of thinking skills. For example, Lan (2001) found that the new curricula of two geography subjects at senior secondary level in Japan that were implemented in 2003 placed more emphasis on enquiry teaching strategies. Students are expected to devote more effort to skills such as project work, map interpretation, observation, and so on. The Hong Kong junior and senior secondary geography curricula implemented in 1998 and 2002 respectively require teachers to practise enquiry learning (Curriculum Development Council, Hong Kong 1998; 2003). Although, the pedagogical reform in geography curriculum reform in Mainland China and Taiwan has not been as “radical” as Hong Kong, the track of development is similar.

FORCES SHAPING THE DEVELOPMENT OF GEOGRAPHICAL EDUCATION

To understand the status and trend of development of geographical education, it may be useful to delve into the forces that shape school curriculum development as a whole. After all, geography has been one of the components of the school curriculum. The shrinking influence of geography and the move towards enquiry learning can be explained by the trend of educational reform in East Asia. However, the historical and cultural background also influences the trend of geographical education in each place.

Historical Influence

In East Asia, the way geography is offered to school children can be broadly divided into two main types geography as a discipline, and geography as part of an integrated subject. It is noteworthy to find that the former British colonies – Hong Kong, Malaysia, and Singapore – have adopted the former approach, despite changes in recent years. Japan and the Philippines, on the other hand, are strongly influenced by the American social studies tradition. Like Japan, social studies was established in South Korea, which was very much influenced by the Americans (Biddle, 1999). Lee (2003, p. 545) describes how social studies was established in South Korea

From September 1, 1946, the integrated subject social studies newly appeared in the primary school curriculum, which was an obvious influence of Deweyan progressivism and of the Korean Educational Commission, whose members had visited America for 4 months in March, 1946.

Recent Educational Reform

Nearly the whole of East Asia has undergone large-scale educational reform in the past ten years. Although the rationales for reform in different places are not identical, the need to face globalisation has been quoted as a major reason for change. The Ministry of Education, Singapore (2005), in its official statement on educational reform asserts

They [the next generation of Singaporeans] will face a world of tremendous opportunity, especially around us in Asia. It will also be a world of frequent and unpredictable change (p. 1).

In Thailand, the rationale for the necessity to change is also related to the pressure of globalisation and the rapid changing society. (Nutravong, 2003)

When curriculum developers conceptualised the curriculum reform measures, they linked the need to face the challenges of globalisation with the perceived weaknesses of “traditional practices”. In Mainland China, Japan, Malaysia, Hong Kong, Taiwan, and South Korea, the official stance is that schools and teachers had been overstressing the transfer of knowledge. Under the transmission model, students had to memorise large quantities of factual knowledge and information that will be outdated before they reached middle age, if not sooner.

In order to face the international competitiveness of the globalised world and counter the weaknesses of traditional practice, the curriculum development authorities in many places consider that the following moves are important

- (1) Encouraging the learning of foreign languages, notably English, which is the international language in the business world.
- (2) Raising the importance of science and technology.
- (3) Ensuring that younger generations be equipped with information and communication skills and especially the use of computers.

- (4) Promoting the development of thinking and learning skills such as communication, analysing, problem solving, and creativity.

With the above considerations as the vision of educational reform, a variety of measures have been introduced. In places where English has not been widely learned and used, curriculum time is squeezed so that this important language can be taught at an earlier stage. Taiwan is a case in point. Before the educational reform, English was only taught when students reached the secondary level. But now, it is a subject in primary schools. Thailand and Malaysia have also placed more emphasis on the teaching of English in their schools (Feng, 2004).

Information communication technologies (ICT) enjoyed similar preferential treatment, particularly before the burst of the IT (information technology) boom in 2000. The Prime Minister of Malaysia, M. Mahathir, was a staunch supporter of developing IT in the school curriculum (Rivera, 2003, p. 566). IT is one of the six key areas in curriculum reform in Taiwan. In Hong Kong, computer studies is offered in nearly all secondary schools (Lee & Lam, 2003). Billions of dollars were invested in this area.

In order to accommodate these new demands, the pressure to squeeze out teaching time from the existing subjects becomes inevitable. This development is accompanied by the move towards curriculum integration. Curriculum theorists have argued that integrated studies can help avoid overlapping of content among subjects, and that it is more conducive to skill development (see for example, Drake, 2000). Under such contexts, moving towards integrated studies becomes rational and trendy. In Malaysia, a new integrated subject, Integrated Curriculum for Secondary School, has been seen as a means to help achieve the goals of educational reform (Feng, 2004; Rivera, 2003).

As the discourse of educational and curriculum reform focuses on helping students to become lifelong learners through developing learning and thinking skills, all subjects, including geography, have a role to play. Moreover, enquiry-based teaching strategies are considered as more conducive to fulfilling the goals of skill development. Disregarding the cultural background, economic development, and political systems, nearly all countries have required geography teachers to teach geography in a more student-centred manner.

The advent of ICT has contributed to the inclusion of geographic information systems (GIS) in the formal geography curriculum. In the most recent senior secondary geography curriculum in Hong Kong, the concept of GIS, remote sensing, and global positioning system are taught in the core component. If teachers prefer, a much more detailed introduction of these advanced skills can be taught as electives. The Hong Kong curriculum developers have also decided to introduce GIS to the new senior secondary geography curriculum to be implemented in 2009 (Curriculum Development Institute and Hong Kong Examinations and Assessment Authority 2005). Without the heavy investment in providing hardware and software facilities in schools, the introduction of GIS will not be possible.

CONCLUSION

School curricula in the East Asian region has been undergoing large-scale and fundamental reform in recent years. Internationalisation of economic activities, the shrinking of space, and the Americanisation of culture have reflected the advent of a globalised world. In response to these changes, and also to improve the weaknesses of the local curriculum, many countries have resorted to large-scale educational reform. The common curriculum initiatives of increase teaching time for English and the introduction of integrated studies have threatened the place of geography in the school curriculum, no matter whether geography is taught as a separate subject or as a component of integrated studies.

The challenge for geography educators and teachers is how to convey a clear message to the public that geography is not only academically demanding, but also a subject of high relevance in a globalised world (Lam, 2005). From the perspective of geographical educators, geography has an important place in achieving sustainable development at local, national and global scales, as well as promoting students' generic thinking and learning skills (see for example, Lambert & Balderstone, 2001; Roberts, 2004). As educational content becomes more and more influenced by the public perception in East Asian countries, learning how to publicise the value and potential contribution of geography to our younger generation becomes more pressing.

Indeed, the move towards integrated studies has encountered resistance from teachers in Taiwan, Mainland China and Hong Kong. Teachers in Taiwan preferred to have a distinct geography component in the new social studies. Though they cannot change the decision of the government to keep the new integrated subject, they exert their influence through market forces on the publishing houses. In 2004, the publishing house that produces the most popular social studies textbook issued a second version of the textbook that presents a clearer picture of the geography component. In the past two years, there have been reports that more people in Japan, Taiwan, Mainland China and Hong Kong become more critical of the suitability of the current wave of curriculum reform initiatives. If the public can get a clearer image of the value of geography, it is possible that the importance of the subject in school curriculum may yet bounce back.

MAINLAND CHINA
PEIYING LIN

The Place of Geography in the School Curriculum

School education in Mainland China is divided into two phases compulsory education (from Grade 1 to Grade 9) and senior high level (Grade 10 to Grade 12). In terms of geographical curriculum development, Mainland China is in a transition period. Since 2005, all schools are required to follow the newly implemented *Geography Curriculum Standards* at the compulsory education level. As stipulated in the official

policy, schools have the autonomy to offer geography as a subject to students from Grades 7 to 9. However, almost all schools only offer geography in Grades 7 and 8.

At senior high level, most schools in China still adopt the existing *Teaching Plan for Senior Secondary School* that was first implemented in 1996. This curriculum stipulated that geography is offered as a compulsory subject. All students are required to take 3 hours of geography lessons each week in their senior high 1. In senior high 2 and 3, arts students take geography lessons for one hour a week. It should be noted that the Government has developed a new senior high geography curriculum that is being piloted in some provinces. This new geography curriculum is more broad-based and provides students with more choices. It comprises three compulsory modules, each accounting for 36 teaching hours, with a total of 108 teaching hours. All senior high school students are required to finish their study within 27 weeks, in return for receiving 6 credits. Besides these compulsory modules there are seven elective modules (each taking up 36 teaching hours and with a value of two credits) that are listed for students and schools to choose. The wide variety of these elective modules can cater for a wide spectrum of student interests, needs and abilities.

The Content of the Geography Curriculum

China's geographical curriculum is designed to provide its citizens with quality education. The aims of the current curriculum are to enable students to understand fundamental geographical knowledge and concepts, develop geographical skills and competencies for further studies and life situations as well as develop proper values and attitudes that commit to actions conducive to a better environment. The new curriculum, capitalising on its existing strengths, comprises a new aim of "Processes and Methodologies".

The junior high geography curriculum comprises mainly regional geography. The four areas of study are *Earth and Maps*, *World Geography*, *Geography of China* and *Geography of the Local Area*. In order to satisfy the requirements of the curriculum, students need to study at least one continent, five regions and five countries for the sub-field of *World Geography*. They should also study five regions under the title *Geography of China*. The geographical knowledge and skills that students are expected to develop are listed in the guidelines in *Geography Curriculum Standards*. Publishers and teachers, however, are welcome to design and plan detailed issues to be learned according to students' needs, aptitudes and the school context.

The compulsory modules of the geography curriculum for the existing senior secondary school consist of mainly systematic geography. This curriculum can be divided into two parts – physical and human geography. The physical geography component includes geographical knowledge and concepts of cosmology, atmosphere, lithosphere, hydrosphere, biosphere and natural hazards. The human geography component aims at helping students to understand the concepts of the inter-relationship and interaction among human activities, places and environments, human settlements and spatial concepts of location which help to explain the distribution of human

activities on the earth's surface. Students should also learn to recognise environmental problems and take appropriate actions to promote sustainable development.

The new senior high geography curriculum, as mentioned above, comprises compulsory and elective units. The compulsory parts include Systematic Geography, Regional Geographical Studies and Applied Geographic Information Technologies. While the compulsory parts aim to build up the most essential knowledge and skills, the seven elective modules are meant to suit the different abilities and interests of students. They are Earth and the universe, Oceanography, Prevention and mitigation of natural hazards, Town and country planning, Tourism geography, Environmental protection and Applied Geographic Information Technologies.

Textbooks and Teaching Materials

The Chinese Government pays great attention to the preparation and production of school textbooks and other teaching materials. To ensure the quality of textbooks and other teaching materials, a review system has been set up. The textbooks approved will be put forward for schools to choose. However, in reality the decision on which set of textbooks and teaching materials to use rests upon the officials of the city or the district concerned as there is a tendency for schools in an area to use the same set of materials. Apart from the officially approved teaching materials, materials for the teaching of the geography of the local region are developed by provincial-level schools to meet the needs of different localities and endow the teaching materials with their own specific characteristics and styles.

Teaching Methods

A wide variety of teaching methods are used in geography classrooms. Besides traditional formats of large lectures and small tutorial classes, teaching strategies including problems and issues for enquiry learning, collaborative learning, research-based learning and autonomous learning are generally used in lessons to let students shoulder the main responsibility for learning. Moreover, students are encouraged to discuss and collaborate with others in group activities and class discussions. Different teaching formats, such as carrying out investigations, data gathering, production, games and web-based teaching are becoming more common in lessons.

Assessment

Students' academic achievements in geographical education are assessed in two ways, namely internal and public assessment. For internal assessment, schools adopt a range of assessment modes including written examinations so as to collect continuous information on students' progress and give feedback on what students have learned. In external assessment, students have to take a provincial public examination at the

end of Grade 8. Students' performance is used to facilitate the selection decisions of senior secondary schools.

At the senior high level, there are two kinds of public assessment. The certificate education examination is normally taken by all students at the end of their first year of senior high school. The certificate examination is one of the criteria to decide whether a student is eligible to graduate from the schools. The second public examination is the nationwide university entrance examination. In most cases, geography is part of one of the integrated subjects being examined.

Conclusion

Geography, as a school subject, has been undergoing rapid changes in Mainland China. In the process of shifting towards curriculum integration, there has been resistance from academics, teachers and even the public. This curriculum change is also shaped by high stake public examinations.

HONG KONG
JOHN CHI-KIN LEE

Changing Emphases in the Geography Curriculum

In Hong Kong, there is no geography in the primary school curriculum and much of the geographical knowledge is taught through the subject of General Studies. Geography is not a compulsory subject in the junior secondary school curriculum within the nine-year compulsory education. Some schools offer social studies or other integrated subjects instead of geography. In the case of geography, many schools offer this subject in two 40-minute periods in a six-day cycle.

Since the 1990s, the geography curriculum in Hong Kong secondary schools has experienced some significant changes. A new syllabus for junior secondary school (secondary one to three) was implemented in 1999 (Curriculum Development Council, 1998). While the syllabus endorses a comprehensive spatial view, it adopts an approach of using problems and issues for enquiry. From secondary one to secondary three, the content areas are *Living in the Urban Environment*, *Human Response to the Natural Environment* and *Resources and Development*. Such an enquiry approach addresses geographical questions such as *what? where? how? why? and so what?* (Curriculum Development Council, 1998, p. 10). In terms of geographical coverage for suggested area of study, the problems and issues cover areas, countries, regions and continents including Hong Kong, the Sahara, China (South China, Shanghai, Guangzhou), USA, Brazil, Japan, Mexico, Australia, Bangladesh, Southeast China, Asia-Pacific region, South America, Europe, and North America. A new senior secondary geography curriculum for secondary four to five was also issued in 2003 (Curriculum Development Council, 2003). The new curriculum highlights both spatial and ecological perspectives on geographical issues and emphasises generic skills such

as critical thinking, creativity, communication, information processing, interpersonal skills, etc. (Curriculum Development Council, 2003, p. 8). The curriculum adopts a thematic studies approach linking themes and issues in a cohesive and integrative manner. It consists of six themes including climate, landform and endogenetic processes, landform and exogenetic processes, agriculture, city and industry. The curriculum also includes issues arising from people-environment interaction such as climatic anomalies, natural hazards, the choice of power, food and hunger, sustainable city and the problem of water. In terms of suggested areas of study, the curriculum covers case studies in the Sahel, Somalia, Southern California, USA., Hong Kong, China (Shandong, Xinjiang, Changjiang), Malaysia, and the Asia-Pacific Region. The Advanced Level syllabus for sixth form (secondary six and seven) was launched in 1988 and has not been substantially changed since then.

Challenges and Prospects

Scholars have pointed out that the development of geographical education in Hong Kong encountered some difficulties, in particular the organisation of field trips because of large class sizes; heavy teacher workload; strong examination-oriented teaching; lack of good management of the geography room; the learning difficulties of students (lack of motivation and weak English); and lack of full use of teaching resources and equipment in teaching (Lee, 2003).

Another area deserving attention is the role of geography as a vehicle for values or affective education in the school curriculum. Geography is often perceived as a subject for environmental education and civic education *par excellence*. For the former, there is an emphasis on education *about* the environment, focusing on learning of environmental knowledge and skills. Less attention is devoted to education *in* the environment, which is about the use of real-life situations for enquiry learning and education *for* the environment, which involves the clarification of values, environmental problem-solving and environmental action (Lee, 1993; Lam & Lee, 2003). For the latter, the rhetoric of the geography curriculum, after the changeover to China, tends to emphasise global, national and local perspectives. Two of the curriculum objectives of the junior secondary geography syllabus encourage teachers to cultivate among students “a willingness to use knowledge for the betterment of society and nation” and “an understanding and respect for other people and their ways of life” (Curriculum Development Council, 1998, p. 8).

Recently, there is an increasing dual emphasis in the senior secondary curriculum of showing “respect for all peoples, their cultures, values and ways of life” and cultivating “a sense of belonging to their society and nation” (Curriculum Development Council, 2003, p. 10). These emphases echo a gradual shift towards “global citizenship and pluralism”, which aims to prepare students to “be aware of their role as a HK citizen, a Chinese countryman and as a member of the global community” (interview with Dr Becky Loo quoted in Yeung, 2003, p. 8). In practice, the teachers’ excessive workloads in helping students prepare for examinations and their inadequate knowledge and

skills in values education, however, hinder the progress of promoting students' moral, civic, environmental and aesthetic values.

Under the curriculum reform in the early 2000s, geography is grouped under the Key Learning Area of Personal, Social and Humanities Education alongside subjects such as History, Chinese History, Economics and Integrated Humanities. While geography remains an independent subject, there is a recent trend of developing an integrated subject in the form of social studies or integrated humanities that replaces geography at the junior secondary level. This is because of the possibility of having liberal studies as one of the compulsory subjects in the proposed three-year senior secondary curriculum (secondary four to six).

Also, there remains, on the part of teachers, the problem of insufficient subject knowledge in covering both human and physical geography. At the junior secondary level, some geography teachers have not majored in geography. This situation poses some challenges to the status of geography in the secondary school curriculum. Nevertheless, the number of students taking geography in the Hong Kong Certificate of Education Examination and the Hong Kong Advanced Level Examination at secondary five and secondary seven respectively has remained stable in recent years, reflecting geography as still a popular humanities subject in secondary schools (Lam, 2003). On the other hand, in the recent proposed senior secondary curriculum and assessment framework for geography (Curriculum Development Council and Hong Kong Examinations and Assessment Authority, 2005), the document suggests fieldwork and spatial data enquiry in the form of school-based assessment to be formalised in the curriculum. GIS (Geographical Information Systems) is also proposed as one of the information technology tools for handling and analysing spatial data (pp. 44–45). While such proposed changes pose challenges for geography teachers, these changes also provide opportunities for broader learning outcomes of students and professional development of teachers.

SINGAPORE
SZE ONN YEE

Introduction

Geographical education in Singapore has in the recent decade undergone many changes. At the primary school level geography is no longer taught as a separate subject but is subsumed under social studies. However, geography as a distinct entity is compulsory in the secondary school curriculum but it becomes an elective in the upper secondary and pre-university levels alongside with history, literature and other subjects.

Changes to the Geography Syllabus

Following the recommendation of the 1956 Report of the All Party Committee to have a common curricula and subject syllabuses for all schools, the then Colonial government published a White Paper on education policy in 1956. A new syllabus for geography for primary and secondary schools was introduced in 1957, designed to meet the needs of all types of schools irrespective of the language of instruction. The syllabus emphasised information about the world and was essentially a regional syllabus with different continents and countries to be studied on a systematic basis.

The syllabus was revised in 1961 but no substantial changes were made. The emphasis was still on the regional approach. Although work started as early as 1973 it was not until 1981 that a new syllabus for the lower secondary was available. This new syllabus was implemented in 1983. The introduction of this syllabus was particularly significant as it marked a watershed in the development of a syllabus based entirely on local effort. In terms of aims, content and teaching method, it differed from the old syllabus but unfortunately it was not carried through to the upper secondary level.

Content Reduction to the Syllabus

In 1997 the Ministry of Education conducted a review of the primary, secondary and pre-university curricular under the vision of “Thinking Schools Learning Nation”, an idea mooted by the then Prime Minister of Singapore, Mr Goh Chok Tong. A content reduction exercise was embarked on to reduce the curriculum content by up to thirty per cent to give teachers time they needed to incorporate the three initiatives of thinking skills, National Education and Information Technology. This syllabus based on content reduction was implemented in 2000–2002.

Following the completion of the first curriculum review in 1997, a second curriculum review was implemented in 2002 to achieve a more responsive curriculum in keeping with changing times and needs.

The purpose of this current round of curriculum review is to update content and to further reduce the content to be covered by 10–20 per cent while retaining academic rigour. These objectives are aligned with Innovation and Enterprise (I and E) and more recently Teach Less Learn More, a move first advocated by the Prime Minister, Lee Hsien Loong in his first National Day message to the nation in order to free up time for teachers to adopt more innovative and interactive methods of teaching and learning.

Recent Changes to the Geography Syllabus

From 2001 a new subject was introduced at the secondary level. This was the Combined Humanities. It consists of Social Studies which is compulsory and an Elective component that may be chosen from either history, literature or geography.

The Combined Humanities is multi-disciplinary in approach. It provides a wide perspective and approach in the teaching of national and global issues while the geography component focuses on the interaction between the human and the physical environment.

Modes of Assessment

Concomitant with these changes in the geography syllabus and content reduction, new assessment modes have also been implemented. Formal modes of assessment include the use of structured questions and multiple-choice questions while informal assessment modes incorporate the use of portfolios, projects and oral presentations. These assessment modes not only test knowledge, but decision-making skills, analysis as well as the interpretation of statistical data, maps and photographs.

Challenges and Prospects

All these changes pose a challenge to the geography teachers who need to keep abreast of these developments. There are several measures that the geography can take. These are

- Participation in in-service courses;
- Participation in local, regional and international conferences; and
- Participation in assessment workshops.

Only then can geography teachers upgrade their knowledge of content and pedagogy, grow professionally and function effectively in these changing times.

TAIWAN
GUANG YANG

Introduction

Geography has long been included in the school curriculum despite its decreasing importance as a result of the move towards curriculum integration under the current wave of educational reform in Taiwan. A review of the changes in geography curricula in Taiwan during the past one hundred years shows that they had been influenced by Taiwan's socio-political situation and development. This paper will describe the development of school curriculum of geography in Taiwan under three main themes the place of geography in school curriculum, the content of geography curriculum, and the teaching materials of geography.

The Status of Geography

Geography was included as an independent subject in the school curriculum in the late nineteenth century when the modern education system was established in Taiwan (Shih, 1983). The status of geography as a school subject had not been changed until the most recent wave of educational reform was launched in 1998. The curricula for primary and junior high schools were linked to form the “Nine Year Articulated Curriculum” in which curriculum integration was promulgated (Hwang & Chang, 2003). From Primary 3 to Junior High 3, geography is now taught through a new integrated subject called Social Studies.

At senior high level, geography remains an independent subject. Students are required to take geography as one of the compulsory subjects in their first two years of senior high education. In the third year, there are two elective subjects that are geographically based one is earth science and the other is geography.

The Content of the Geography Curriculum

Until the curriculum reform launched in the late 1990s, the emphasis of the geography curriculum had been focused on regional studies such as the learning of geography of China and the world (Chen, 1999). In Social Studies for junior high school students,

Table 1. The Content of the Geography Curriculum for Senior High Schools.

Major themes		
Senior High 1	• First term	• Systematic geography themes including landform, climate, hydrology, soil, biogeography, population, economic activities, transport, settlement, political geography
	• Second term	• The geography of Taiwan and the major regions in the Chinese Mainland (such as south China, north east China, etc.)
Senior High 2	• Whole year	• Population of the world, cultural regions of the world, studies of the major regions in the world (such as south east Asia, east Asia, eastern Europe, etc.)
Senior High 3 (Earth Science)	• Whole year	• Geology, ocean, climatology and astronomy
Senior High 3 (Geography)	• Whole year	• Skills in geographic studies, data processing and analysis techniques, how people interact with the environment, regional and urban planning

Source Ministry of Education, Taiwan (1995)

the geography component still skews towards regional studies. This inclination is also reflected in the curriculum for senior high schools.

An interesting development in the geographic content at junior high level is that the emphasis of local geography has been strengthened. Firstly, the cultural background, social development, history, and geography of Taiwan are the themes of social studies for the whole year of Junior High 1. Secondly, all junior high schools are granted the autonomy and allowed time to develop programmes that help students understand their local community, including its geography.

This shift to “localisation” is closely linked to the political change in Taiwan (Ou, 2000). Since the return of sovereignty from the Japanese to the Chinese in 1945, Taiwan had been under the autocratic rule of the Nationalist Government. In 1987, the Nationalist Government adopted a more democratic stance in its ruling. Since then, the voice to move to a more Taiwan-based school curriculum has become louder and louder. Hwang and Chang (2003) explain this as follows

... in Taiwan, the issue of local studies education is always subject to political struggles; educational issues related to this local studies content are commonly complicated, politicized, and at times even perverted, especially while taking the influence of localism into account. (p. 599).

As the influence and power of the “localists” gained an upper hand, the move towards local studies has become a clear move in the twenty-first century.

Teaching Materials

The textbook has been the single most important teaching material in schools in Taiwan. A review of the characteristics of teaching materials can help illustrate the kind of geography taught in classrooms in Taiwan. Chen (1994) pointed out that the contents of geography textbooks were very much structured along the line of regional geography. In the textbooks, there were many names of places and factual information of different places and regions. This has led to an impression that geography was a subject that emphasised rote learning of factual information.

The above weakness has been eased in the new sets of textbooks currently used. However, when we compare the textbooks with those developed in other places, there is still room for further improvement. For example, activities on developing students’ geographic skills are still not common and are not well-integrated with the content.

Before the current wave of educational reform, all textbooks were designed and developed by a government agency. At present, the textbook market is opened. Schools can choose the textbook they like. One of the publishers followed the integrated approach to publish a set of social studies textbooks for junior high schools in 2004. In 2005, the publisher launched a second version of the textbooks that clearly segregated geography and history components from other components. For example, in Book 1A for Junior High 1, the book is divided into three chapters, namely “The natural environment of Taiwan” (location and extent, relief, coast and island, weather, climate and vegetation, hydrology), “The development process of Taiwan (part 1)”,

and “From personal to community development”. It is obvious that chapter 1 deals with the geography of Taiwan and chapter 2 is devoted to introducing the history of Taiwan (Kang Husan Educational Publishing Co., 2005). Such a way of structuring the content of social studies suggests that teachers are not fully used to the integrated structure. Instead, they prefer to maintain the demarcation of subjects.

Conclusion

Geography educators and teachers in Taiwan are facing two major challenges. On the one hand, they need to protect and strengthen the status of geography in school curriculum. On the other hand, the strong emphasis on traditional regional geography has given an image of rote learning and conservatism of the subject. These two challenges may be related. If the general public and policy makers of curriculum realise that geography not only can provide useful knowledge relevant to students’ daily life, but can also promote the development of thinking and learning skills, the importance of geography may become more secure.

ENDNOTES

1. Asia can be divided into a number of regions. For example, India, Pakistan, Bangladesh, Sri Lanka, Nepal, and Bhutan make up South Asia. East Asia, on the other hand, comprises countries and places in the eastern part of Asia. China (including Taiwan, Hong Kong, and Macau), Japan, South Korea and North Korea, the Philippines, Vietnam, Indonesia, Brunei, Laos, Myanmar, Malaysia, Cambodia, Thailand, and Singapore are the major countries in East Asia. In this paper, constrained by the availability of data and information, the discussion is focused on China (including Taiwan, Hong Kong), Japan, South Korea, the Philippines, Indonesia, Malaysia, Thailand, and Singapore.
2. Some places such as Hong Kong use junior secondary to describe the early stage of secondary education whereas other places such as Japan adopt the term lower secondary. In this paper, junior secondary and senior secondary are used to denote the first stage and second stage of secondary education.
3. The Japanese school system follows a 6-year primary, 3-year lower secondary, and 3-year upper secondary system.

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MARIA LÚCIA DE AMORIM SOARES, BEATRIZ
CEBALLOS GARCÍA, GRISELDA GARCIA DE MARTIN
& FABIÁN ARAYA PALACIOS

GEOGRAPHICAL EDUCATION IN SOUTH AMERICA

INTRODUCTION

MARIA LUCIA DE AMORIM SOARES

Today it is claimed that there are many serious crises related to societal fragmentation, a lack of consensus, a great deal of universalism, a multicultural world, globalisation, neo-liberalism, post-modernity, together with an awareness of several “deaths”—the end of representation, the end of metanarratives, the end of utopia, the end of history, the end of geography, the end of the nation-state and many other similar related themes. Amid all these debates, there remains the question How can we deal with such plurality and have an orientation for a daily life, either on individual or social levels, as well as in the context of philosophical or economic matters, politics, esthetics, culture, history and geography?

Such contents are linked to topics that have been forgotten until now, but are currently in the spotlight. Categories linked to changing identity—ethnicity, gender, religion and local politics—as well as informal economic practices, vernacular feelings and conversations, they have contributed to changes in the meaning of such great themes as metaphysics and nation, religion and culture, faith and reason. How can we recognise all these perspectives even when we are unable to embrace all of them? How can geography teaching be successfully practised in an excluding society, through ethnic values focused on freedom and solidarity in a world of new demands?

Geographical education involves knowledge and knowing, that is, the specific material which is sustained in the domain of the teacher, of the geographic science production—its concepts, principles, its facts. It involves processes, that is, a set of skills concerned with action related to learning action, for example, reading a map or locating particular information; and it involves interactions demonstrated in attitudes which the teacher wishes to stimulate and which express the values of being and living as a citizen. Working as a geography teacher in any school in Latin America means recognising that there exists a brutal continuation of the inequalities experienced by the majority.

Geography is concerned with relationships in the world. Educating students is a process in which two social individuals, the teacher and his or her students are linked by ideas. This chapter highlights geography teaching in Brazil, Argentina, Chile and

Venezuela. The content of the curriculum comprises the ideas taught in geography, the foundations of geography theory and methodology, and the different perspectives on the subject.

ARGENTINA

GRISELDA GARCIA DE MARTIN

The Argentine System of Education From the Liberal Oligarchic State to the Present Stage

The Argentine system of education developed simultaneously with and according to the development of Argentina as a nation. As in most Latin American countries, the emerging State not only had to institutionalise the administration and the territorial organisation it also had to establish economic, political and social functions. With regard to the education system Casassus (1990) and Filmus (1997) have identified four developmental stages

- the liberal oligarchic state (from 1880 to approximately 1950);
- the benefactor state (from 1950 to approximately 1970);
- the crisis of the benefactor state (from 1970 to approximately 1980); and
- the post-social state (from 1980)

During the first stage, the *liberal oligarchic state*, the most important educational laws were passed

Law 1420 (1884) determined that Education should be compulsory, graduated, free and secular.

Law 1597 (1885) (also known as the Avellaneda Law) organised the university/college sector.

Law 4874 (1905) (also known as the Lainez Law and completed by the Palacios Law) gave the government the right to establish primary schools in all provinces where they were required. In this way they made sure that there were primary schools all over the country. The legislation of those days was advanced even when compared to some European countries.

The system was mainly centralised taking into consideration that the aims of education were social integration, consolidation of national identity and the construction of the State itself. Although there was no unified legislation, these laws determined the system of education for more than a century.

The *benefactor stage* covers the period up to the 1970s. An important feature of this stage was the inclusion of the lower social classes in the education system. This was the main difference from the previous stage. Consequently the system of education developed there were more people attending school and there was a large variety of institution including technical, high schools and even private schools.

In the following stage, the *crisis of the benefactor State*, the most important issue was the beginning of the process of decentralisation, starting in the early 1970s intended

to make pedagogical improvements. However this was decided on economic grounds. Responsibility for primary schools was transferred to the provinces so that they began to be supported by the provincial authorities instead of the national State. From this point of view education was no longer seen as an investment but as expenditure.

During the period of the *post-social state*, there was a tendency towards decentralisation. In 1992, secondary and higher levels were transferred to the provinces and in 1993 the Federal Law of Education was passed. This, Argentina's first General Law of Education, included all levels and cycles and it tried to achieve a profound change in the educational system to improve its quality.

This law

- Extended compulsory education from seven years to ten years;
- Fixed a new structure for the educational system;
- Considered the Federal Board of Education as the organic structure in charge of educational practices and policies. Board members were empowered to formulate policies relating to all educational affairs. Educational authorities for each of the twenty-three provinces and the City of Buenos Aires are members of this Board. The chairman is the National Minister of Education;
- Set up a profound curricular transformation;
- Included public schools and private schools. The organisation and curricula of private schools are similar to those of public schools;
- Covered all levels, cycles and other branches of the educational system such as special education, adult education, technical and art education;
- Established a national teacher training programme based on the assumption that the quality of education students receive is largely dependent on the competence of the people who staff the schools. The goal here is to ensure opportunities for teachers to increase their knowledge and skills necessary for their competent performance in schools; and
- Organised a national programme for evaluating student achievements.

Up to this point, three important issues remain to be resolved. First, it might be considered that we are not in the post-social stage. We are probably living in a crisis of this post-social stage. Surely, educational historians in the near future will be able to throw light on this period. Secondly, this Federal Law of Education was not actually applied at the same time and in the same way in all of the provinces. The main reasons for this were economic, political and technical. In sixteen per cent of the provinces the law was not applied, it was partially applied in twelve per cent of them and it was completely applied in seventy-two per cent of them. Thirdly, there is an important debate about this Law in Argentina today.

Nevertheless, as it has already been stated, this Law not only sets up a profound curricular transformation it also fixes a new structure for the educational system. Both are related in this analysis. The Basic Common Course Contents—reached by an agreement between the twenty-three provinces and the City of Buenos Aires—are divided into two main branches a curricular core for General Basic Education and

another for Orientative or Specialised Education. We can now turn our attention to the analysis of the Geography Common Contents at both levels of education.

Geography in General Basic Education

The Basic Common Contents are divided into a series of sections. Each section refers to an area or a discipline studied at each level of education. As far as General Basic Education is concerned, five of these sections are related to the social sciences. Specific geographic contents are developed in the first one. The second section concerns history and sociology. The third and fourth ones are about methodological procedures and attitudes that are engaged in explaining or understanding social reality. The first section title *Societies and Geographical Spaces* has as main axes environment, population, economic activities and urban-rural spaces, and territorial or regional political organisations.

The geography curriculum goals for the end of General Basic Education are

- Locate and describe spatial groups at regional, national or an American level. Study relationships between relevant elements and their causes;
- Make relationships between environmental conditions of a certain place, the activities engaged in there, its population and living conditions;
- Explain how social groups have changed the environment and evaluate impacts of environmental damage in the cases studied;
- Realise the relevance of different geographical spaces taking into consideration political and economic relationships; and
- Read and understand maps, geographical charts, photos and satellite images and organise these data in different ways through frameworks, diagrams or written syntheses.

Geography Key Contents in General Basic Education

Table 1 shows the contents organisation in the first, second and third cycles of General Basic Education. The three cycles are compulsory in Argentina.

Geography in Orientative or Specialised Education (Polimodal Education)

The aim of this Orientative Education (polimodal = *poli* many; *modal* orientations, specialisations) is to prepare all students for employment, further education and citizenship. These specialisations are economics, humanities and social studies, communication and arts, natural sciences and production of goods and services.

The Common Course Contents for this level are subdivided into two branches a core for general education and a specific core for specialised education. These curriculum cores are also divided—like in the Common Contents for General Basic Education—into different sections. Each section refers to an area or a discipline studied at this level.

With regard to geography, it contributes to the development of general educational skills in four of five of these orientations and it acquires a relevant place in one of them (humanities and social studies). Geography is part of the social studies sections. Geographic contents are developed in the first one under the title *Societies and World Geographic Space, Globalisation and Regionalism*. Their main axes are *Structure and Dynamics of Global and American Space* and *Economic Processes, Development and Quality of Life*. The third and fourth sections focus on procedures and attitudes, as in General Basic Education.

Geography curriculum goals at the end of this level are

- Recognise, compare and make relationships—about homogeneity and differences—between political units, economic spaces, population settlements, cultural areas and different world environments;
- Understand some global and American problems and evaluate economic, social, political, cultural and environmental consequences;
- Understand economic dynamics and apply some basic economic concepts to the analysis of case studies; and
- Read and understand maps, geographic charts, photos and satellite images and organise social data using different methodological procedures including the use of computers in class.

School Geography in Educational Reform in Argentine Innovations and Discipline Weaknesses

Distinctive Aspects of the Common Contents

Geographic languages become relevant within the Basic Common Contents. Unlike other sciences, geography uses four languages oral, numerical, graphic and cartographic. If it is considered that knowledge construction is based on using language because its management enriches thinking processes, practising these four languages should develop several skills. As these contents are enclosed within communicative theory, instrumental teaching acquires a leading position. From this point of view, not only “what is taught” is important but also “how it is done” because choosing data implies epistemological and axiological decisions. That is why geographic languages are the real tools of work. Its usage in all levels of teaching is essential to replace rigid schemes with other more creative and active participation ones. The different levels of complexity and its almost non-existent thematic limitation allow them to be used in all educational cycles and in each moment of class (Schmidt, 1997).

Another relevant feature within the Basic Common Contents of geography is *the use of different scales*. Different levels of analysis are one of geography’s main characteristics. Learning geographical thinking is learning different scales and different levels of analysis. This is a key aspect of our discipline. As a concept, it seems to be easy but it has theoretical, methodological and thematic connotations. So, the difference between geographical scale and cartographic scale has to be underlined. The first one limits a deep geographical analysis. If we choose a local scale, we can

Table 1. A Synthesis of Geography in the Three Cycles of General Basic Education.

4	5	6	7	8	9	10	11	12	13	14	15	16	17	18 ... years old	
	K	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	1st	2nd	3rd	Higher Studies	Post-graduate studies
pre-school		BASIC GENERAL EDUCATION													
FIRST CYCLE				SECOND CYCLE				THIRD CYCLE							
KEY CONCEPTS															
<i>First Axis Geographic space</i>															
		Neighbourhood and geographic space			Located geographic space			Geographic space. Absolute and relative property							
		Basic cartography			Spatial images. Scale			Other geographic languages. Cartographic and graphic languages. Satellite images							
<i>Second Axis Environment</i>															
		Physical environment. Near and distant landscapes			Spatial groups. Functioning and contrasts			Elements and processes of the physical environment. Regions. Province of Mendoza, Argentine and America							
		Natural dangers. Perception			Natural hazards and human activities Natural resources			Natural dangers and catastrophes. Social impacts and solutions. Natural resources. Resource potential and evaluation							
<i>Third axis Population, economic activities and urban-rural spaces</i>															
		Human beings' needs. Resource usage. Environmental impacts.			Environmental problems contamination and quality of life Sustainable resource usage. Environmental preservation.			Environmental problems at different scales local-global. Causes and possible solutions Sustainable development							

<p>Population. Distribution. Habitat Rural and urban landscape. Resources and activities.</p> <p>Rural landscape. Ways of living. The city. Functions and relationships. Social behaviours. Means of transportation. Displacement, ways and reasons Work at different scales local-global</p>	<p>Population. Regional and national distribution. Kinds of placement. Geographic spaces and economic activity</p> <p>Rural environment. Distribution, organisation and contrasts. Urban spaces. Urban system. Visible and invisible aspects. Means of transportation. Topology. Incidence of economy and social relationships. Work with different scales. Political organisation of territories.</p>	<p>Population. Demographic structure. Causes and processes. Economic activities. Production systems. Contrasts and relationships between urban and rural contexts. Rural exploitation. Soil uses. Work. Technology. Urbanisation at different scales. Urban hierarchy and culture. Transportation nets and flows. Localisation. Distance and accessibility. Political organisation of territories. Processes. Argentine and Latin America in the global economy. Regional blocks.</p>	
KEY PROCEDURAL CONTENTS			
<p>Direct and indirect observation. Registration of local landscape Cartographic localisation. Graphic representation. Description and comparisons of landscapes.</p>	<p>Data choosing and registration. Cartographic localisation and understanding. Explanation of environmental relationships. Comparisons and classifications of spaces.</p>	<p>Data search from different sources. Cartographic relationships. Cartographic design from direct and indirect sources. Analyses of relationships of deeper complexity. Comparisons and hierarchies of spaces.</p>	
KEY ATTITUDINAL CONTENTS			
Ethical and social development of scientific and technological knowledge. Communicative development.			

get a large diversity and we also have more possibilities for making comparisons. If we choose a global scale, data are less detailed and territorial organisation and homogeneity may be appreciated.

It needs to be pointed out that in Argentine a hierarchical debate, working from a local scale to a global scale, is still current. Some teachers use the historical way of working using a concentric organisation of scales giving much importance to the local scale. Others try to do it another other way, using a global scale. Others, who support critical theory, try to apply different scales in order to understand territorial dynamics due to social groups' actions, nets and visible and invisible flows.

On the other hand, traditional cartographic scale is the main element of maps. Maps are enriched if they are considered within communicative theory. Using charts—a distinctive geographic language—may reveal quality messages and communication power. A cartographer may show a map's meaning by the graphic semiotic. This message is not neutral. It is just a link between the real world and the image that the cartographer has of it. That is why cartographic images are so powerful. They may tell the truth, they may hide it, they may tell a lie and they are powerful manipulating tools.

The Basic Common Contents are part of an open and flexible curriculum. On the other hand, constructivist epistemology is in the foundations. This context has favoured the presence of contents related to environmental education in all cycles and levels of school geography. These environmental topics are holistic and the students' expectations related to them are attitudes-aptitudes change about human-environmental interaction. Geography as a social science and as a part of "synthesis sciences" is a remarkable field of knowledge for including issues about environmental education. Consequently, environmental values are a social construction and they demand an inter-relationship between teaching and being (Aramburu, 2000). The best didactic approach to it appears to be problem-based learning.

These contents are becoming deeper in each school cycle with topics like systems, structures, functioning, impact, etc. up to the most complex one of sustainable development. This issue is a real challenge nowadays taking into consideration the current economic paradigm of Argentina.

In Argentina, the environment is always present in the public agenda. At higher levels of education, it is one of the substantive subjects being studied by many academics and researchers and their research works are published in specialised journals and/or books. In spite of this favourable scientific context and relevance given to formal and non-formal environmental education, it has a weak presence in everyday school teaching. Even though environmental issues are included in the school syllabus and text-books for teaching school geography, they may be considered as only innovations and isolated links. They cannot be taken as a conceptual, procedural and attitudinal core that makes it possible to achieve an efficient didactic transference of a complex and multi-faceted issue like environmental education.

The main obstacles here are of a different nature, including geography teachers' professional background, institutional inactivity related to this topic, and the lack of educational projects concerned with environmental education as a cross-curricular

theme. It is still necessary in Argentina to overcome this stage of environmental education as part of the school curriculum in order to reach an environmental perspective that includes all aspects of education.

Weak Aspects of the Common Contents

The dichotomy between physical geography and human geography is deepened in the Basic Common Contents. Within members of the scientific community there is no doubt about the existence of “one geography” it is considered as a social science with its own peculiar characteristics. Nevertheless, geographical contents within Argentine reform seem to be as part of a fragmentary and scattered science. On one hand, many specific geographical contents—mainly those of physical geography—are part of the conceptual corpus of other subjects, like the natural sciences. In this case the development of an eco-systemic approach is restricted. On the other hand, the disciplinary weakness at the polimodal level is due to the fact that certain geographic issues with relative significance acquire the status of subjects in a curriculum plan. That is the case for topics like *Economics, environment and regional development, Construction of regional space, Contemporary regional problems*, that are subjects in the Humanities and Social Sciences curriculum plan. This is a difficult challenge for secondary school geography teachers.

Educational reforms in some Latin American countries, including Argentina, all have the same pattern an areal curricular organisation. Geography is actually a social discipline within the social sciences area. There is no doubt that a complex human problem should be studied from different points of view to understand and explain it accurately. Who can deny that geography, history and sociology together may have the possibility to give a structure to the study of social problems? Here the problem of teaching is that an interdisciplinary point of view is established in the Basic Common Contents but a disciplinary one is actually applied in the classroom.

Among different ways of encouraging an interdisciplinary approach, the one of making relationships between similar subjects is the most usual in Argentina. But, in this case, adding subjects does not seem to be the best way of doing it. Engaging in interdisciplinary work is not easy. It is necessary to overcome a disciplinary background, to assume that learning and teaching social problems consists of analysing multi-causal situations, to accept that not all issues or methods can be integrated and, finally, to understand that the interdisciplinary approach cannot be undertaken from one moment to another. It implies a long and difficult social construction (Follari, 1996).

Although the Basic Common Contents has a section concerned with attitudinal contents—considered as a whole with concepts and procedures in everyday teaching—we have not succeeded in considering geography as an outstanding discipline for promoting *values education*. Contemporary school geography is based on the “complexity paradigm”, with a systemic and pluralistic approach, having as its own field of study “the earth as man’s living place” with a structural power that should develop cognitive processes related to universal, social and individual values. Why can we not discover from the “landscape” concept the moral consciousness to

exercise duties of willingness? Why can we not consider “eco-development” as a way to teach about equal opportunities?

School Geography in the Classroom. Doubts, Certainties and Challenges

There is no doubt that Argentine education is in crisis. Secondary education, as part of it, is also in crisis and, consequently, so is geography teaching. Among multiple causes, political, economic and social, it is necessary to emphasise that education has lost its own social meaning. It seems to be that it is not engaged with values and knowledge about our society.

On the other hand, the weakness of geography teaching should be analysed from a systemic approach. I have already mentioned some of the many problems outside the educational system. But the weakness of geography teaching also depends on the existence of a profound gap between scientific knowledge and school teaching

Table 2. School Geography in Argentine Yesterday and Today.

Au: Callout missing for Table 2 in the text.

Yesterday	Today
Educational paradigm positivist paradigm.	Educational paradigm positivist paradigm is still in use with a tendency to the interpretivist qualitative paradigm and critical theory paradigm.
Learning theory traditional encyclopaedic teaching and behaviourism.	Learning theory traditional encyclopaedic teaching and cognitive and social constructivism.
Geography was taught in a descriptive, encyclopaedist, literary way. Linear scheme with a scattered contents structure. Physical geography was most important. Continental geographies were usually studied.	A territorial multi-dimensional point of view. As a scientific knowledge, there is a pluralistic approach but this is not present in the classroom. A weak theoretical and methodological core and important difficulties in didactic transference from academic knowledge to school knowledge. Absence of a logical pattern from a systemic point of view.
Disciplinary approach.	A real approach in theory but a disciplinary approach in the classroom. There is innovation about the content that is divided into concepts, skills and attitudes.
Descriptions and explanations.	An approach to teaching-learning by competencies . “Think space to act on it”.
Teacher acted as a transmitter and student as a receiver.	A valuable pedagogical mediation.

knowledge. In Argentina, secondary school teachers graduate from university and non-university higher levels. There are more than twenty of these institutions in Argentina providing four or five years of study to become a geography teacher. There is no institution responsible for preparing teachers for the social sciences.

When graduate teachers come into the labour market there is a gap. Most of these teachers have to be responsible for many classes a week because salaries are too low. They are not in touch with institutions responsible for scientific knowledge. There is no great development of research into geography teaching and without research there is little or no innovation. School knowledge is mediated through secondary school geography text-books. Finally, there are training courses but they are not considered as places where teachers reflect on their own school practices. There is still poor teacher professionalism.

Consequently, if it is true that it is necessary to evaluate processes of educational reform in Argentina to improve some weak aspects, it is true also that teacher professionalism is necessary. Educational reform will not take place if it does not reach the classroom. In many of these classrooms geography as a significant subject remains something to be achieved.

BRAZIL

MARIA LÚCIA DE AMORIM SOARES

By the end of the 1970s, changes in the foundations of thought in the Brazilian geographic community inaugurated a process of questioning the theoretical-methodological foundations of geography as a tool for thinking and acting in the world. The analysis parameters based on the traditional relationship between Nature–Man–Economy began to be challenged by other points of view, generically identified as “critical geography”. This was evident in a series of debates, round table discussions, lectures and publications.

Initially, these changes had repercussions in the academic field, and they were followed by changes in school geography. School geography had been distinguished by the absence of questioning its actual meaning, both by teachers and students. The result was that school geography had been diverted away from reality.

In 1987, the Brazilian Association of Geographers (the AGB) recognised the stage reached in geographical thinking in the academic community by organising the first national conference on geography teaching. This was held in Brasilia under the title, *Fala Professor* (“Speak up, Teacher”). Critical voices were raised against the traditional neutral view of geography. At the same time, new issues, strongly influenced by political economy, were discussed including the analysis of the role of the State, of multinationals, of international economic blocks, the bourgeoisie, the media, international relations, the Cold War, class struggle, disarmament and minority groups.

Since the 1970s, the implementation of basic pedagogical projects in the fundamental (or primary) and middle (high-school) teaching levels had been based

on official documents. These were designed and presented by governmental agencies responsible for guiding teachers' work and the development of the teaching-learning process. There were the so-called *Curricular Guides*, published by the Education Secretariats of the Brazilian States according to the law 5692/1971. This law defined the guidelines and basic rules for national education. It was applied at a time when there was little debate because of the various forms of political control and repression applied by military Governments that then ruled the country. The guidelines controlled the basic work of all teachers.

During the 1980s, there was an opening up of the country's political life—the so-called “re-democratisation process”. From 1985, this led to a process of re-designing new curricula. In the State of Sao Paulo, through the work undertaken by the Teaching and Pedagogical Norms Committee (the CENP), with support from university-level teachers from the University of Sao Paulo (USP), a new discussion process was launched. This resulted in the formulation of what was then called *Curricular Proposals*.

The Curricular Proposal for Geography, published in 1988, had an innovative character. It included the structuring of pedagogical contents and suggestions for the conduct of the pedagogical work. It was underpinned by a different theoretical-methodological line, that of dialectical historic materialism. This line generated angry controversies among teachers, although, finally, it was consolidated though not becoming hegemonic.

In 1997/1998 the National Curricular Parameters (NCPs), were designed by the new Federal Government that had come into office in 1995, and governed the country until 2002. These parameters replaced the previous curricular guidelines and proposals. The NCPs were not part of an isolated project, but were integrated into the public policies for education launched in 1996, with the signing of a new Law of Guidelines and Basic Rules for Education. They were established according to a wider set of policies dictated to the so-called emerging countries, such as Brazil by a group of more economically advanced countries. The Brazilian government offered its support and co-operation. Regarding the NCPs for Geography, the work expressed the view of a group of geographers from USP, different from the group that had elaborated the Curricular Proposal for the State of Sao Paulo. This group included in their text their intention to produce a pluralist proposal. However, according to critical evaluations, their proposal became quite eclectic, with segments containing and expressing an historicist point of view, while other segments took a phenomenological direction.

In this context, it is interesting to record some of the debates held on the NCPs for geography teaching, with particular reference to that part of the Human Geography course's post-graduation programme at the Department of Geography, of the University of Sao Paulo. This was published under the title *Reforms in the World of Education—Curricular Parameters and Geography (Reformas no Mundo da Educação—Parâmetros Curriculares e Geografia/1999)*.

1. Oliveira (1999) emphasised that authors had opted for not explicitly explaining their concepts of geography. By so doing, they had left the field open to the

possibility of multiple interpretations. They were caught in a trap represented by plurality, showing also that that eclecticism had more to do with the absence than with the presence of a philosophical conception. By accepting, and at the same time criticising, Marxist concepts, NCPs' authors had actually followed the path they seemed to have embraced, of a radical subjectivism, as shows by the following segment transcribed from the Parameter for Geography teaching for primary education (1st to 8th grades)

However, restricting the explanation to a student that his or her daily life, in the framework of social conviviality, is circumscribed only by economic determinations involving the modes of production would simplify such explanation. Would the category "mode of production" be able to adequately explain the experiences acquired by that student in his/her social space and with the symbolic representations that are elaborated by social imagery? People have the freedom to give different meanings to all things, and in their daily lives they constantly deal with these meanings ... When a student moves to a new address, to a new school, to a new neighborhood or a new city, he/she feels not only the differences of material conditions found in that new place, but also the changes in symbols, codes, and meanings. In every image or symbolic representation, the connections created with a specific place and with other people are constantly, consciously or unconsciously, guiding human actions (1990, p. 50).

2. Pontuschka (1999) argued that NCPs were targeted at a minority of well-informed teachers, who already knew with, varied degrees of intensity, the relevant literature and who could follow the directions covered by geographical science in its different fields as well geography as a teaching subject in recent decades. He says suggested that the NCP text was too theoretically oriented for teachers who continued to use the basic teacher's book as their only or main literature. The NCP for Geography teaching represented a step forward in some aspects and a backward step in many others. For example, it was a step forward when it recovered concepts such as landscape, place, territory, region, but it did not articulate the construction of these concepts with regard to general objectives and methodological procedures. Even if the economy was not absent, it was little emphasised. All in all, it seemed aseptic. It lacked the great conceptual polarisations on the appropriation of space and the many types of power forces found in society—economic, political, religious, the State and dominating oligarchies that ally with the social representations of the many segments of society on matters of geographical space (1999, pp. 16–17). For Vesentini, the great merit of the NCPs was the reassertion of the teachings emanating from UNESCO. These emphasised interdisciplinary studies and transversal subjects—ethics, the natural environment, cultural plurality, sexual orientation, health, work and consumption, as expressed in the Delors Report to UNESCO (1998) *Education The Treasure Within*. Vesentini wrote (2004, p. 239)

When NCPs are generic and only point to general guidelines, such as was the case for primary education from the 1st to 4th grades, or, mainly, for high-school education, they were not harmful and may have even contributed to teachers' and educators' reflections on Geography issues. However, when they get into details and valorise curricular contents, such as was the case for primary teaching from the 5th to the 8th grades (of course we are talking about geography here, to whom NCPs for these teaching levels establish even the specific contents to be taught in every grade and semester!), they were actually more of

a hindrance than a help and constituted an embarrassment for teachers who tried to take their students' reality into account.

The general objectives of the geography field, as expressed in the NCPs, expected a student to construct a set of knowledge regarding concepts, procedures and attitudes, which shall allow him/her to

- know the current world in its diversity, favouring comprehension on how landscapes, places and territories are formed;
- identify and evaluate the actions of human beings living in society and their consequences in different spaces and times, with the aim of stimulating the assertive and reactive participation in local social and environmental issues;
- know the functioning of the natural environment in its multiple relations, in order to understand the role of societies in the construction of territory, landscape and place;
- understand that improvements in the conditions of life, in political rights, in technological advancements and socio-cultural transformations are achievements not yet enjoyed by all human beings worldwide;
- understand the importance of the different languages for landscape reading, including images, music, literature, data and documents, so as to interpret, analyse and relate information about the space;
- know how to use the graphic language to obtain information and to represent the spatiality of geographical phenomena; and
- valorise the socio-cultural heritage and to respect social diversity, acknowledging them as the rights of peoples and individuals and as the strengthening elements for democracy (2001, p. 35).

With such objectives in mind, the pedagogical contents for the grades 5 to 8 were organised according to thematic axes, subjects and items. These considered the wide issues covered by geography, which should be followed by deeper reflections on the Brazilian context within the world order, taking also into consideration the local specificities. The thematic axes were (2001, p. 41)

- Geography as a possibility for analysing and understanding the world;
- The study of nature and its importance to human beings;
- The countryside and the city as socio-spatial formations;
- Cartography as an instrument for bringing places and the world together;
- The evolution of technologies and of new territorialities established round networks;
- A single world and many geographical scenarios; and
- Modernisation, lifestyles and the environmental problem.

In high school education in Brazil, geography is part of the field covering the human sciences and their technologies, together with history, philosophy and sociology. The aim is to strengthen the conceptual body united under the title Human Social Relations, that includes the basic concepts of nature, space, time and culture.

Aiming at the development of geography teaching, a wide range of projects, experiences and researches have been implemented in universities and schools. These argue for raising its status as a pedagogical discipline, a move many consider to be urgently needed. To legitimise this view, it is enough to record here some statistical information, taken from the *World Development Indicators, 2002*, published by the World Bank, as quoted by Vesentini (2004, p. 234)

Brazil, the ninth largest economy in the world, hardly reaches the 79th position in international competitions for mathematical sciences, history and geography. While dozens of Nation States have managed today to reduce almost to zero their rates of illiteracy—including many Southern hemisphere countries Uruguay, Chile, Singapore, South Korea, Cuba and others –, Brazil still has a rate of illiteracy as high as 14%, being one of the rare countries still having millions of illiterate adults. The rate of young people between 15 and 17 years-old enrolled in high-school education in Austria is of 96%, in Canada it goes up to 97%, while in Argentina and in Jamaica it is of 90%, in Paraguay it is of 51%, while in Brazil it reaches only 32%. The average time spent in schools for an adult living in the United States and in Canada is of 12 years, in South Korea it is of 11 years and in Argentina 8.8 years, while in Brazil it is only 4.9 years.

It is important to add to what has been reported above some data from the Human Development Index (HDI), released in September/2005, as calculated by the United Nations Development Programme (UNPD). The index is an indicator for evaluating the quality of life, and it showed that Brazil has evolved in the HDI ranking—from 0.790 to 0.792. Brazil is getting closer to countries with higher levels of development (more than 0.800 points in the ranking), although being still ranked in the 63rd position among 177 countries. It also showed that no country in the world has such an unequal distribution of wealth. Thus 10 per cent of wealthier Brazilians hold 46.9 per cent of national income, while the poorest 5 per cent of the population hold only 0,7 per cent. Brazil is also the eighth country with the worst distribution of wealth in the world, sharing this sad situation with such extremely poor countries as Lesotho, Namibia and Swaziland, in Africa, and in Latin America, being ahead only of Guatemala, Paraguay and Venezuela, countries that have worse wealth distribution figures.

To conclude, and considering what has been mentioned above, we may say that geography teaching in Brazil offers a path for stimulating the valorisation of human resources, the preservation of natural resources, while at the same time fomenting advances in social justice and a generalisation of equality of opportunities, thus contributing to full citizenship for all, a step that requires knowledge of the world, from local to global scales, considering also that our world is always in a process of change and transformation resulting from the interaction of cultural, social-economic and environmental factors.

SCHOOL GEOGRAPHY IN CHILE

FABIÁN ARAYA PALACIOS

This section analyses diverse aspects of school geography in Chile. The situation of geography in the curriculum of primary and secondary grades, the topic (area) related

to sustainable development, the training of geography teachers, supportive textbooks for lessons, and the use of new Information and Communication Technologies (ITCs) in geography teaching.

The Curriculum in Primary and Secondary Schools in Chile

Currently, Chile is engaged in educational reform, which has transformed the curricular and didactical aspects of all areas and sub-areas of primary and secondary education. The official document, in which the most significant goals of the curricular reform are established, is known as the *Basic Curricular Matrix*, which becomes operational through the programmes for each one of the formal education courses (Ministry of Education, 2002).

The Chilean educational system has four sub-systems. The first sub-system, nursery school education (pre-school level), provides for children aged 1 to 5 years; the second sub-system, primary general education lasts eight years (children aged 6 to 13 years); the third sub-system, secondary school, lasts four years (children aged 14 to 17 years). Finally, the fourth sub-system corresponds to higher education, aimed at obtaining professional titles and/or academic degrees (Muñiz, 2004).

Geography in the School Curriculum

The geography course in primary and secondary education is integrated into the area of social sciences, through learning areas and sub-areas. During the first cycle of primary general education (first to fourth grade), geography curricular contents are integrated into the learning area titled *Comprehension of the Cultural, Social and Natural Environment*. In this area, social, geographical, and historical topics are integrated. Among the main geography topics, we can find cartography, the geographic co-ordinate system (longitude and latitude, systems of time keeping), political-administrative organisation of the regions in Chile, and the human and natural characteristics.

In secondary education, geography is integrated into the learning area titled *History and Social Sciences*. Topics are dealt with from a local and regional perspective, moving towards a comprehension of the national, continental and global geographical environment. The most relevant geographical topics are the geographical region and its systemic analysis; the natural, economic, social, and cultural aspects of the different regions of Chile; the issue of pollution related to an inappropriate use of natural resources; poverty and inequality among the population; natural hazards; and the search for urban and rural environmental sustainability.

Geographical topics can be contextualised according to the spatial and cultural realities surrounding students. Thanks to this flexibility, the curricular contents become more relevant, and contribute in a better way to the materialisation of a spatial way of thinking in the students (Stoltenberg, 2004).

Geographical Education for Sustainability

In Chile, the subject matter associated with sustainable development and environmental education has been a major concern among biology and natural sciences teachers. This situation is currently changing, and geography teachers are becoming concerned about this issue. The universities educating geography teachers are increasingly incorporating topics related to sustainable development into the formative curriculum.

Geographical education, as an educational approach, presents diverse possibilities in order to contribute to sustainability, especially from the perspective of the interrelationships between human beings and the territory they inhabit (Fuentelba, 2003). Geographical education for sustainability¹ aims at answering to a demand with deep social, economic, and environmental connotations: globalisation, climatic change, human development, (biological, socio-economic, and cultural) diversity, sustainable development (Stoltman, 2004), which imply not only the individualisation of interrelationships, but also the positioning of an ethical and supportive dimension with the forthcoming generations (Duran, 2005).

The Education of Geography Teachers

In Chile, the education of teachers is based in the universities and professional institutes. In the first cycle of primary general education, there are no teachers committed to the instruction of geography. The professional who teaches in the area of *Comprehension of the Cultural, Social and Natural Environment*, is a generalist teacher, with a training background involving all the learning areas (mathematics, language and communication, arts, among others).

In the second cycle of primary education, the teacher also has a general educational background. In some instances, he or she plays the role of a history and geography teacher. By means of an authorisation issued by the Ministry of Education (MINEDUC), he or she can teach in the primary grades. The Ministry of Education is promoting a teaching programme for primary teachers with a major in social sciences, in order to deal in depth with the contents characteristic of history, geography and the social sciences.

In secondary education, the teacher gives lessons in history, geography, and social sciences, with an education oriented to the comprehension of spatial and temporal dimensions of society. There are some recent experiences focused on instructing history and geography teachers separately. However, the tradition of integrated history and geography is widespread in Chilean universities.

During their in-service professional preparation, teachers receive training courses provided by the Centre for Experimentation and Pedagogical Research (CPEIP), which depends on the Ministry of Education of Chile, by giving courses requiring personal attendance and by correspondence (e-learning). There are also training programmes focused on curriculum development with the support of universities oriented specifically to disciplines and geography didactics.

There are textbooks specifically oriented to primary and secondary students, which are provided, at no cost, by the state for students of municipal schools and state-supported schools. In addition, there is also a variety of textbooks produced by publishing houses available commercially. These include geographical topics with many illustrations and diverse didactical activities.

Geography teachers, appropriately, use the new information and communication technologies (ITC) in their lessons. Schools have computer laboratories for students. However, the provision is insufficient for the huge number of students who must be helped by their teachers.

Geography teachers receive support in the pedagogical use of computers through a national project of the Ministry of Education of Chile called *Proyecto Enlaces* (Project Enlaces). Through this project, diverse curricular innovations have been developed in classrooms, and didactical resources have been generated in order to teach geography by means of CD ROMS (software programs) and on-line publications (on the internet) (a specific example can be found in www.odisea.ucv.cl).

Among some Chilean journals oriented to geographical disciplines, and containing a section devoted to geographical education, we can mention *Geoespacios*, from the area of Geography Sciences at the University of La Serena (www.geografia-uls.cl); *Revista de Geografía del Norte Grande*, from La Pontificia Universidad Católica de Chile (www.puc.cl); *Tiempo y Espacio*, from the University of Bio Bio (www.ubiobio.cl); and *Anales de la Sociedad Chilena de Ciencias Geográficas*. Among the educational journals can be mentioned *Revista Educación Ambiental* (www.conama.cl/certificacion), which was published in a joint effort by diverse state institutions.

Future Possibilities for Geographical Education

Geography education in Chile is emerging supported by meaningful projects connected to the area of education for sustainability. From 2002, and due to the need of creating an integrating system of multiple experiences on environmental education developed from the State and civil society, the main target to be reached is the implementation of the *Sistema Nacional de Certificación Ambiental de Establecimientos Educacionales* (National System for Environmental Certification of Educational Centres) (SNCAE) (Baquedano, 2003).

The SNCAE constitutes a joint work platform among diverse institutions which, due to its range and permanence, can usefully contribute to education for sustainability. Through this programme, complementary courses of action will be developed to strengthen environmental education, care and protection for the environment, and the generation of associated networks for local environmental management². For that reason, the exchange of knowledge, the experiences shared by Geography teachers from different world areas, and the constitution of academic networks, seem to be the most effective strategies for a world where distances are only recognised in a virtual way.

VENEZUELA

BEATRIZ CEBALLOS GARCÍA

Geography in the School Curriculum

The Venezuelan educational system has four sub-systems. The first sub-system comprises initial education (maternal phase, 0 to 3 years) and nursery school education (pre-school level), provided for children aged 4 to 6 years; the second sub-system is the Bolivarian school education (general primary education for children aged 7 to 13 years); and the third sub-system is secondary school or Bolivarian high school education (students from 13 to 18 years). Finally, the fourth sub-system corresponds to higher education, aimed at providing professional qualifications and/or academic degrees (MECD, 2004). In the Bolivarian school and the Bolivarian high school geographical knowledge is found in the integrated plans related to social education—the diagnosis of social issues, explanations and interventions in community development. A specific schedule for geography is only established at the pre-university level where four hours a week are allocated to it. At other levels, it is in the social science area where six to eight hours are assigned per week.

The principal aim of geographical education in Venezuela (in the Bolivarian school and the Bolivarian high school) is articulating the relationships between school, society and space. This approach is assumed in the curricular design of postgraduate studies in the teaching of geography at various universities that offer degrees in geography and whose graduates can also teach the subject.³ The writing of papers by geography specialists about communities and the didactical application constitute some of the strengths that contribute to the country's geographical knowledge. This has served as a support for educational policies of the Education Ministry related to curricular changes in primary schools, high schools and universities in the social science area. Geography is seen as contributing essential knowledge for the promotion of citizenship education, as illustrated in Figure 1.

The dynamic of agent-subject relationships is synthesised in the “pedagogical action and situation” (at the centre of the diagram). In this way, curricular changes are proposed that focus on the relationships within school/community/intrinsic development. The social sciences have become the axis for the integration of other areas. In the curricular proposals for an integrative conception of knowledge, the role of geography has been revalued from a geohistorical perspective. The proposals are oriented towards the configuration of social and co-operative human beings, through the design of research projects and seminars about endogenous and sustainable development linked to socio-ecological and productive activities in the regions and the country as a whole. The participation of students and teachers in the community is driven by project proposals associated with local development needs; Strategies are oriented towards educating citizens who are highly motivated to acquire knowledge, engaging in analysis and the valuation of reality. They also need to be able to perceive

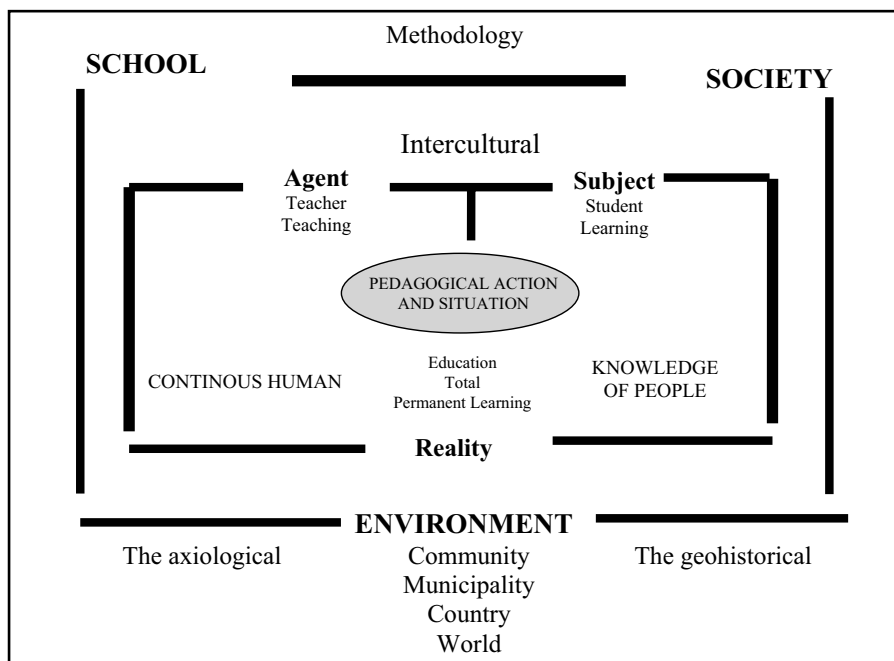


Figure 1. Concepts underpinning geographical education
(Source Ministry of Education, Venezuela 2004).

contradictions, change their understanding, construct knowledge at higher levels and produce proposals for alternative solutions to community problems.

The Education of Geography Teachers and Geohistorical Analysis

The geohistorical analysis perspective has been derived from an intellectual community led by Ramón Tovar. The Venezuelan Geodidactic Research Center, guided by this social researcher and educator (1978–2005) argues that geohistory is the central theoretical basis of intellectual products that have didactical, classroom applications. The geohistorical concept is set within an interdisciplinary vision, where economic, sociological, anthropological and historical viewpoints come together. It also leads to the identification of “geohistorical permutations” as a means of discovering signs of change with the purpose of providing guidelines for concrete action that comply with the needs of human groups as the product of given historical conditions. Members of the Centre at UPEL and LUZ have started to study communities in depth using this approach in both undergraduate programmes and in the Masters programmes in geography teaching. From 1978, the Centre has aimed at contributing to the improvement of geography teaching as a social science for 2,126 teachers in 26 pilot

schools, with an emphasis on social analysis as a starting point for planning and learning in collaboration with other knowledge areas.

The methodological training results from the identification by the schools of communities' problems, potentialities and cultural, geographical, economic, historical, ecological, political and social characteristics. The individual becomes both a source of information and a study object. He or she is seen as part of the identified problems in his/her community and in the community where the school is located. In this way, diagnosis of the situation is applied to the community as a basis for the learning process. It transcends the achievement of programme objectives in the social science area, to become an integrative strategy. A connection is created between subject areas, increasing students' conscience levels and participation. The student's situation is considered as an object for reflection and as a source for training future citizens with a firm social conscience. These allow us to know the socio-historical situations of selected communities, as well as intervention proposals with educational, cultural and economic relevance, in the context of decentralisation.

The influence of French geography (Strasbourg University and Caen University), with its social emphasis, is present in these investigations. More than 150 geohistorical research studies have been conducted in different locations, grouped into 15 federal entities. These constitute a foundation for studies that go deeper into defining these spaces and guaranteeing valid recommendations for desired changes. Teaching at different educational levels is geared to the social research methodology through fieldwork (surveys, interviews), cartographic representations and satellite information. Interdisciplinarity is sought in seminars, integration proposals as well as in intervention projects. Textbooks are reduced to being sources for reference and consultation and their use is not compulsory. The use of materials provided by the research team is suggested; this becomes part of research project proposals or interventions to solve the problems of the community in which the school is located.

Bibliographical references are significant. However, promotion and dissemination, together with training needs in epistemological and methodological analysis, create requirements that are met with a specific selection and organisation of basic material. This material is used to carry out both the diagnosis and the adoption and application of integrative analysis criteria. Publication of these investigations is restricted to specialised pedagogical journals such as *Geodidáctica* (CIGD) *Geohistoria* (UPEL) *Tierra Firme* (TROPYKOS) and *Geocritica* (ULA). Among the proposed actions to overcome this situation are the presentation of research in electronic versions; the creation of information networks to achieve teachers' connections with knowledge production centres and schools; and the creation of a web page that allows direct access to existing geohistorical investigations in the country and accomplishes real time exchanges and discussions about intervention findings and criteria.

The results from the implementation of curricular proposals reveal the importance of a geographical education organised as a developed approach intended to place citizenship development in the context of peoples' needs related to a specific community. Successful experiences have been recorded in postgraduate research studies and special events where it has been emphasised that the relationship between

school-community-space in generating and developing solidarity, commitment and responsible values gives way to the promotion of ethics formation. Moving from the specificity of a place to generalise to national and international contexts is a means of understanding globalisation and possible action. Studying places with an interdisciplinary vision, in our case with a geohistorical approach, is a valid option for constructing our identity as a people and nation and as a historical-pedagogical project when included in the country's educational policy.

Prospects for Geographical Education

The geographical analysis perspective adopted by Bolivarian schools and Bolivarian high schools can significantly contribute to the education of more committed citizens, with a national identity derived from their community recognition and able to get involved in the community using highly structured knowledge and articulate values. The systematic demand for an integral geographic knowledge of Venezuelan communities requires the construction of a national space theory at higher education with an interdisciplinary approach that would achieve the interpretation of the characteristics of these realities, proposing guidelines for interventions oriented towards the improvement of people's quality of life. In this way, geographical knowledge will be more useful to society, for its influence on the coherent development of individuals with a critical attitude to reality, and capable of generating arguments for managing public and private community projects in the different regions of our country.

ENDNOTES

1. Geography education, as an educational approach, presents diverse possibilities in order to contribute to sustainability, especially from the perspective of the interrelationships between human beings and the territory they inhabit (Fuentelba, 2003).
2. The institutions committed with the initiative of the SNCAE are Ministry of Education of Chile (MINEDUC), Corporación Nacional Forestal (CONAF), Comisión Nacional del Medio Ambiente [National Commission for Environment] (CONAMA), United Nations Organization for Education, Science and Culture (UNESCO), Asociación Chilena de Municipalidades (ACHM), and Consejo del Desarrollo Sustentable [Council for Sustainable Development] (CDS) (Fuentelba, 2003).
3. The Universidad Pedagógica Experimental Libertador (UPEL-Maracay, Rubio, Maturín, Barquisimeto, Caracas) Universidad Central de Venezuela (UCV), Universidad de los Andes (ULA), The Universidad del Zulia (LUZ) and Universidad Católica Andrés Bello (UCAB).

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SECTION C:

THE FUTURE OF SCHOOL GEOGRAPHY

MICHAEL WILLIAMS

INTRODUCTION: WHITHER SCHOOL GEOGRAPHY?

The future of geographical education is closely allied to the future of research in geographical education. Researchers have the opportunity, indeed the responsibility, to gather data, analyse them and extrapolate future possibilities. They face the challenge of defining trends and offering directions for future progress. Their accumulated wisdom ought to be respected by policy makers at all levels, from government agencies through to classroom teachers, and used in a direct way to lead reforms in curriculum, assessment, examinations, publications and pedagogy.

Of course, these researchers need to be immersed in the major changes across the globe that impact on society at large as well as on education. In this context, such tensions as those between globalisation and localisation, between vocational education, academic education and liberal education, between modernism and postmodernism, figure prominently. Globalisation/localisation impact on geographical education directly in that the substantive aspects do, or could be, taken into account in geography syllabuses. Globalisation is subject to a wide range of definitions extending beyond international patterns of trade and the transfer of information using increasingly sophisticated technologies to include international efforts to combat terrorism, the illegal drugs trade, human trafficking and pollution. Globalisation/localisation impact on research in geographical education in terms of international collaboration intended to resolve research problems and in the transmission of research findings across the global educational research community. With regard to localisation, it is on the local level that curricular and research agendas are most sharply focused. Curricula are designed by government agencies to meet national agendas, though processes of decentralisation within nation states often permit much more local considerations to be taken into account. Research usually follows these agendas and research undertaken in a national or local context is often quite uninteresting to professionals working in other localities and nations. Globalisation, however, will reduce the strength of local and national boundaries and intensify the need for cross-border sharing.

Some of this sharing is already evident, as reports in Part 2 have shown, of cross-border transmission of ideas regarding curriculum design and the place of geography within new arrangements. What is the future of geographical education? There are big issues to be faced and researchers have a contribution to make to answering key questions. Should the drift of school geography towards being defined as a social science be halted? Should there be a re-assertion of the role of school geography as a bridge between the social sciences and the natural sciences? Should school geography

be re-defined as a natural science? Answers to these questions have implications for the attention that schools will give to such global issues as sustainability and citizenship.

These questions have to be set in the debate that will be increasingly important in the future about the principal aims of school education. The tensions between vocational education, liberal education and academic education are evident across the globe. Partly this is a concern with student motivation how can students be encouraged to take schooling seriously and how can student truancy be reduced. Partly it is concerned with ensuring a steady supply of skilled workers. And partly it is concerned with promoting civil harmony and a healthy and politically educated citizenry. Where will school geography fit into these ongoing debates? Currently, in some countries there appears to be a strong emphasis on the academic with the links between schools and universities receiving most attention. In other countries citizenship education figures more prominently and school geography is conceptualised as a contributor to nation-building and multi-cultural education. Researchers need to explore the implications of these definitions for geography as a school subject, for students and for communities.

Another area of contemporary concern for practitioners and researchers that will intensify in the future is how schools will come to terms with the increasingly sophisticated technologies available to students. A preoccupation in some countries with the need for students to gain first hand fieldwork experiences as integral parts of school geography courses is likely to be replaced by a strengthening preoccupation with the role of virtual geographical experiences. The challenges, already evident, will be faced in terms of the nature of instruction, the role of textbooks and other published materials, the types of student assessment and, indeed, in the design of classrooms.

In Part 3 some of these issues are addressed. Joop van der Schee, in Chapter 12, reviews the future impact of new technologies. His call is for geographical educators and researchers to give much more attention to digital literacy. There is considerable scope for international collaborative research into the use in school geography of digital games, remote sensing, Geographical Information Systems (GIS), geocoaching, DVDs, digital photography and videoconferencing. The focus of such research extends beyond classroom pedagogy into new types of learning within and beyond schools.

Education for sustainability has been addressed in many diverse ways across the globe and will continue to challenge geography practitioners and researchers. The triple focus of environment-society-culture demands a re-examination of the nature of school geography. At its simplest, this requires close attention to the place of geography in integrated courses, cross-curricular arrangements, whole school approaches, extra-curricular activities and school-community partnerships. Daniella Tilbury and David Wortman, in Chapter 13, offer a review of the extensive literature in this growing field and identify potential entry points for geographical educators and areas for fruitful investigation for researchers.

Education for sustainability is frequently explored in the context of environmental citizenship. However, citizenship has many other perspectives and John Morgan explores these in Chapter 14. In the contemporary world a definition of citizenship that focuses solely on the functions of local and national governments is unsatisfactory.

There is increasing awareness of the need to take into account world citizenship, transnational citizenship, dual nationality, economic citizenship and environmental citizenship. Whereas national governments considered that it was their responsibility to define citizenship, increasingly this is being challenged. Citizenship education, like education for sustainability, is contentious. Conventionally, citizenship education has been regarded in many countries as an implicit broad aim, often expressed in such terms as international understanding or multicultural education. Geopolitical changes have challenged this soft approach and, in some countries, geographical educationists are being encouraged, sometimes required, to incorporate citizenship into their courses. In some countries, this is already well established, in others it is new. As with education for sustainability, there is a need to examine the traditions within national school geographies and explore how attention to citizenship can be accommodated within the traditions. Where the survival of school geography is at stake compromises may need to be made. What are the implications for the substantive and pedagogical aspects of school geography? This question underpins Chapter 14.

Finally, Rod Gerber, in Chapter 15 addresses lifelong learning, a much-neglected aspect of school geography. It could be argued that geographical educators have been narrowly blinkered by the emphasis they have given to school geography. There has been a remarkable disinterest in the linkages between school geography and the geographical education of adults. It would appear that the assumption is that adults have little or no interest in learning, formally or informally, about geography. This is not to ignore the links between schools and universities. However, universities cater for a minority of adults and the links are usually discussed in the context of those students who progress from schools to the study of geography in universities. A greater concern with geographical education for adults will be increasingly important for the health of school geography. This is so not only with regard to the way school geography is perceived and defined. It also has implications for the way geography is taught and learned. As students approach adulthood, teachers need to include in their teaching repertoires some of the strategies discussed by Gerber.

JOOP VAN DER SCHEE

GEOGRAPHY AND NEW TECHNOLOGIES

DIGITAL NATIVES

“Our students have changed radically. Today’s students are no longer the people our educational system was designed to teach,” remarks Prensky (2001a, p. 1). They are Digital Natives. Computer games, email, the Internet, cell phones and instant messaging are integral parts of their lives. “Those of us who were not born into the digital world but have, at some later point in our lives, become fascinated by and adopted many or most aspects of the new technology are, and always will be compared to them, Digital Immigrants” (Prensky, 2001a, p. 2).

The question is how do these changes affect both the manner in which we teach and how our students learn? Do our “Digital Immigrant” instructors speak an outdated language? Prensky would certainly argue in favour of this. He also states that we need to invent “Digital Native” methodologies based on current student use, and designed to aid anyone in this pursuit. Prensky thinks that we should use more “Digital Game-Based Learning” and organise learning environments according to students’ experiences with digital games. There are many options in this area beyond entertainment. For instance, <http://socialimpactgames.com> is known for its “serious games” whose primary purpose is not merely to entertain the user. Many geographers are familiar with the computer game *SimCity*. Another example, though not as widely recognised, is a game entitled, *Food Force*. *Food Force* is a game that generates children’s interest and understanding concerning global hunger, a condition that kills more people than AIDS, malaria, and tuberculosis combined. In *Food Force*, a major crisis has developed in the Indian Ocean, on the island of Sheylan. A team is sent to stimulate, increase, and help the World Food Programme effort to feed millions of hungry and poverty stricken people. An aircraft circles over a crisis zone. War. Drought. People are hungry. This is the virtual world of the *Food Force* game. It represents many parts of our global reality where 800 million people simply have insufficient food.

This kind of digital game parallels the non-linear cognitive structures that computer raised children have developed. Many students say that they enjoy these games because they are fun. If a game is fun for the user, this indicates that he or she is more likely to be able to master the problem-solving challenges within it, and subsequently adopt a more problem-solving mentality. Students are obtaining necessary skills and credentials in school, and their learning is continued beyond the classroom. They are also learning after school while playing these games and, as Prensky argues, this

learning is the reason why they play. These games are so rich in ideas and idea-building skills. Students find this stimulation fun. Why, then, should we not use digital games in schools? Of course many criticise today's educational games; however, if some of the games do not increase or stimulate learning, it is not because of the nature of it as a game, but because those particular games are poorly designed (Prensky, 2001b).

MORE THAN GAMES

Although the use of Digital Game-Based Learning is quite beneficial, it is just one way of getting students involved in learning geography using new technologies. Remote sensing, Geographical Information Systems (GIS), Geocaching, DVD or video, digital photography, and videoconferencing are other examples of useful new technologies for educating students in geography. Today, there are many ways to use new technology in geography lessons. Showing a video of an earthquake or tsunami from a television programme and introducing it into the classroom is becoming easier every day. It also helps to make geography lessons more challenging. The use of digital photography in geographical fieldwork allows pupils to reflect on their work in the field when they return to the classroom. These photographs can be shared with students at other institutions allowing constructive comparisons. Remote sensing based on realistic cases such as the shrinking of Lake Aral may be very effective in drawing students' sincere attention to geographical processes.

Geography educational technology tends to fit into two broad categories (van der Schee, 2003)

- Database systems which include geographic information display software, geographic information systems, remote sensing image processing systems, and computer mapping software. GIS can be seen as a sophisticated mapping system; and
- Exploratory computer programs and simulation systems that aim to inspire students to discover the world by playing a role in a specific geographic setting. Many exploratory computer programs in geographical education are games based upon real or fictitious information about places and regions of the world. In contrast to some games, computer simulations offer the opportunity to change parameters. Students can compare the effects of certain decisions concerning the modification of parameters in the simulation model.

Considering their capacity to store and handle large amounts of fast paced information and work in an interactive manner, computers are beneficial in introducing database systems, games, and simulations in the classroom.

GEOGRAPHICAL INFORMATION SYSTEMS

Although many new technologies may be useful for geographical education, special attention is given to the contribution GIS provides. It is connected to the way in which

geographers work more than any other new technology. GIS has the ability to store, retrieve, manipulate, and analyse a wide range of spatially-related data in order to produce maps. With GIS, the user may ask data-related questions when referring to the map, search for patterns and distributions, and investigate the underlying relationships between different sets of data. A computer-based GIS compiles data quickly and efficiently, providing mapping facilities that would take a person numerous hours, even days to complete manually.

The use of GIS plays a key role in human activities today. The application of this technology is increasingly found in such areas as environmental, resource and hazard management, and infrastructure and planning. Educators are now investigating innovative approaches to using GIS in the classroom (Donert, 2005). The benefits of using GIS include enabling pupils to explore patterns and relationships, to test hypotheses, to analyse large quantities of data, and to recognise that the interpretation of large quantities of data is complex and yields a wide range of possible answers. GIS is a challenging essential for geography education. Not only is it a sophisticated mapping system and tool for spatial analysis, it also has the potential to incorporate numerous data sets as mapped layers and display them quickly and efficiently, which may help students to visualise relationships within spatial phenomena (Stoltman & De Chano, 2003). GIS is, therefore, a powerful tool for geographical analysis and a valuable resource to teach geography and spatial thinking.

Student research using GIS has already become a reality in some schools. Interesting and useful information about American secondary high school students conducting environmental research with the aid of GIS can be found in *GIS in Schools* (Audit & Ludwig, 2000). Publications concerning the GISAS project of the European Union indicate that European secondary school students have also used GIS in their research on water quality (Houtsonen, Johansson & Kankaanrinta, 2004). Although Southeast Asia is less advanced in the use and implementation of new technology in geography lessons as some western countries, learning geography can be improved through the introduction of GIS related skills in schools (Kim, 2005).

Although the number of people using GIS in modern society is growing fast, the technology has not been adopted by educators at a rate commensurate with expectations. Since its inception as a desktop application for professionals in a wide range of occupations in the early 1990s, GIS has diffused slowly throughout educational contexts worldwide, more specifically, into select elite primary and secondary school classrooms (Bednarz & van der Schee, 2006). Analysing the factors that seem to be impeding GIS is of great interest to us, for this analysis helps to facilitate the creation of positive strategies that may promote the implementation of these systems.

In his study on the status of GIS in the United States, Kerski (2003) conducted a national survey of educators in the 1,520 high schools that purchased GIS software by the year 2000. These high schools represent less than eight per cent of the estimated 20,000 public and private high schools in the United States (CCSSO, 2001). He found that only half of the educators who owned the software were using it and, of that number, a mere twenty per cent used it in more than one lesson in more than one class. His research indicates that teachers find the software complicated, that they

lack time to develop their curriculum using GIS, and that they have little technical and instructional support. GIS's failure to be widely adopted in classrooms in the United States may be attributed to the lack of teacher training (Bednarz & Audet, 1999) in addition to the inadequate research on the effectiveness of the technology in enhancing geography and science instruction (Baker & Bednarz, 2003). It is clear from surveys and previous research that educators have been slow to adopt GIS because of its technical complexity. Students' first steps using GIS can be quite frustrating. Mastering the software is a complex matter as soon as the students progress to the next step, the majority of the knowledge attained from the previous lesson seems to have been lost (Schleicher & Lawrence, 2005). Many funded GIS projects, such as those sponsored by the US National Science Foundation and GISAS, use full-blown, industrial strength software not adapted for classroom use. The learning curve for this software is steep; most teachers are not trained in adapting professional software to the classroom. GIS is a challenge to learn and to use in the classroom. It does have the potential to succeed, however; but, for it to do so, we must understand some of the factors that influence the adoption of GIS technology for educational purposes. Teachers will become more receptive to learning new software if they perceive it as beneficial to their students. Furthermore, the new technology should be relatively easy to learn and should be integrated into the curriculum, for it is important to use the GIS software properly in primary and secondary education to receive the maximum education benefit. Baker and White (2003) examined a non-equivalent quasi-experimental research project, wherein two versions of two-week long Project Based Learning units were developed, implemented, and assessed. Students used a collaborative GIS or paper maps to support data analysis activities in an eight grade Earth Science unit. The study found a modest, but significant, improvement for geographic data analysis for students who used GIS. One of the conclusions of this research project was that GIS technology can be an invaluable resource for extending student learning. This can be accomplished when a proper instructional framework is provided along with data analysis and spatial reasoning concepts. Teacher training institutions must assume the important role of bridging the "GIS gap" between universities and schools, preparing new generations of teachers to make the most of GIS in their classrooms. Training teachers how to work with GIS requires more than teaching the new methodology. Teaching with GIS has little to do with traditional teaching and requires a higher order of student thinking skills. In order to foster such skills, teachers and students may need to work in new ways through enquiry-based methods and problem-solving strategies. Students assume new roles, directing their own work as they investigate problems like the decline in water quality or the distribution of criminal activities in their region. Students become planners and decision-makers, strengthening their ways of understanding geographical relationships. When observing a GIS classroom that prioritises problem-solving strategies, it is clear that students are motivated and enjoy taking on real world issues. The teacher supports student learning by serving as coach and role model for these problem-solving strategies. Thus, teachers must possess GIS skills, research methods, and problem-solving strategies (Bednarz, 2000). Consequently, teacher training institutions have much work to do. Although there are

signs in various countries that GIS technology is becoming more widely used in the field of geography at all educational levels, there is still progress to be made before it is an accepted and integral part of teachers' pedagogy. It is clear that further investment in this new technology is necessary. Signals from the field of geography teaching are promising as these two examples show

- As part of a programme at the Richards Free Library in Newport, New Hampshire, home-schooled children, ranging in age from eight to fourteen, interviewed vendors at the Newport Farmers' Market, then visited the actual farms (ESRI, 2003). The goal of the project was to support and promote the consumption of local farm products using GIS, photos, farmers, and their products (http://gallery.iftd.org/archives/new_hampshire/index.php); and
- As part of their research projects, secondary school students aged fifteen to seventeen in The Hague in the Netherlands used GIS to make maps to investigate the distribution of coffee shops in the city. Coffee shops in the Netherlands are well-known selling points for soft drugs and are concentrated in inner cities. The students learned that, according to the law, coffee shops should not be located within 500 meters of a school. However, when students mapped out the coffee shops in the inner city of The Hague, they discovered many were located too close to schools, indicating that the State had reason to revoke their permission to operate legally. This investigation was part of one of their geography examination assignments and later these students wrote a report for the local newspaper based upon their investigation.

PARADIGM SHIFT

What is true for GIS is also true for other new technologies in geography teaching; each asks for another way in which the teacher plays a role in the learning process. Traditional forms of schooling treat knowledge as a fixed commodity to be transmitted from teachers to students. Many teachers and students are focused on facts and concepts, not on generalisations and relationships. Many authors believe that the new technologies will stimulate a shift in teaching and learning. Lambert and Balderstone (2000) assert that Information and Communication Technology (ICT) has the potential to enhance students' skills of geographical enquiry. The interactive, user-centered open structure of the new technologies, particularly the internet, is ideal for the creation of constructivist learning environments (Sharpe, 2000). Research carried out for the National Council for Educational Technology in the United Kingdom in the mid 1990s provided evidence and reasons for using ICT in schools (Leask, 1999). Some of these reasons are first, ICT gives students immediate access to richer source materials; secondly, ICT can present information in new ways that help students to understand it, assimilate it and use it more readily; thirdly, ICT eliminates manual data processing and allows students to concentrate on its interpretation and use; fourthly, ICT motivates and stimulates learning; fifthly, ICT has the flexibility to meet the individual needs and abilities of each student; and finally, ICT allows students

to reflect upon what they have written and revise it with little difficulty. In using new technologies, students are given opportunities for more active and independent ways of learning. Using e-mail and online communication like video conferencing, modern geography lessons will be more than traditional geography lessons. Rather, they will be more interactive with the outside world. The gap between school and the outside world will diminish. In addition, the role of schools will change with the new technology. In the near future, school will most likely be a workstation for Computer Supported Collaborative Learning and a meeting place for students to discuss the results of their work with peers and teachers. Teachers, who in the near future will become more like “digital natives” themselves, will instruct, inform, and coach. In traditional geography lessons it is the teacher who constructs the world for the students. Modern geography lessons challenge students to explore the world independently and discuss their discoveries with teachers and peers. New technologies will stimulate a shift in teaching and learning from behaviourist to social-constructivist approaches (Hill & Solem, 1999). This is a change from traditional approaches towards a new paradigm. Modern teaching strives for understanding, a process in which educators must play an active part. This epistemological shift requires teachers to develop a deeper and broader understanding of their subject matter and furthermore, foster new pedagogical strategies. Additionally, teachers must be prepared to be both innovative in their thinking and committed to the real practice of their profession (Stone Wiske, Sick & Wirsig, 2001).

DIGITAL LITERACY

Although the use of new technologies in geography teaching has recently become more accessible for some regions of the globe, there are still a vast number of areas that do not enjoy the benefits of these educational aids. Teachers working with chalk and blackboard are in flagrant contrast to teachers who can use new media. This divide in digital literacy is visible not only in the world as a whole, but also within countries and even within cities and individual schools. One must keep in mind, however, that the digital “haves” and “have-nots” exist not as a dichotomy, but as a continuum.

Currently, many governments are investing in new technologies in education. For instance, computers and the internet are seen as essential instruments for the modernisation of the Russian educational system, resulting in the establishment of some ambitious federal programs. By committing to the development and dissemination of these new technologies, the government is able to play a leading role in the process of “informatisation”. In 2002 over nine million people in Russia had access to the internet. By the end of 2005, the number of users is predicted to increase eightfold. But the problems in the school sector are still quite serious, however many schools in rural areas do not have modern equipment and often not even electricity. Only five per cent of the rural schools have a modern computer, and furthermore, financing for the necessary equipment is often problematic. Consequently, governments have begun to co-operate with social and business organisations, for instance, JUKOS oil and gas

company is now working to certify teachers for internet education. From 2000 to 2002 about 40,000 teachers completed relevant training. As a result, 29 regional centres for vocational training were established. Furthermore chats, forums, and networks were created for teachers and interested parties, each aimed at increasing the acceptance of new media and support for educators in remote areas. Putin's foreign policy also promotes a global perspective on educational efforts using new media. Although continued action is necessary, Russia is definitely on its way to becoming part of the international internet community. Other countries will inevitably follow this example. It is not the question of whether new technologies will be used in geography teaching, but when and how.

PANACEA

Modern technology helps learners gain a better view of the world. In addition, it creates more time for reflection concerning global events than ever before. Yet, even though in the near future new and more innovative technologies will be more widely used in geography teaching, there remains no guarantee that the quality of geography in education will be better. Digital literacy is one thing, geographical thinking is something else.

Using new media is no panacea for all problems currently faced by geography teachers. On the contrary, introducing new media in geography teaching may cause as many problems as it solves in its current economic and technological state. The most common problems associated with the use of GIS include the lack of quality software and hardware, high costs, computer-related viruses like RSI, the enormous amount of unstructured and swiftly changing data, and restrictions upon data accessibility when working with GIS. However, the most important question seems to be how to help students take full advantage of the opportunities that new media currently provide to geographical education. Cognitive structuring – assisting students to organise their own experiences by providing explanations or meta-level strategies – is difficult in practice (Watson, 2000, p. 19). Therefore, geographical models can be helpful. If this is true, then geography teachers not only need exceptional training in ICT and coaching techniques, but even more importantly training in structuring geographical information. The effective use of new media in geographical education stimulates not a simpler form of geography, but a more demanding enquiry (Kam, 1996, p. 212). Geography teaching without new media is no longer desirable. Geography teachers and students have to deal with an enormous amount of data, texts, maps and figures. Modern technology is very helpful in handling all this information. An up-to-date and well prepared geography teacher is truly the crucial element in preparing the next generation of young people to find their way in this swiftly moving technological world.

CONCLUSION

Geography is the compelling story of our changing planet with all its challenges and problems. Everything in the world is connected. What we do here and now can have profound consequences. Whether these consequences surface now or later, or manifest here or at the other side of the globe, there will be important consequences for all of us. This is not a game. Geography is the discipline to help students to think critically about their interdependent world. New media can help students to discover and analyse it faster, easier, and better than ever before.

Three years ago I wrote “It is a fair guess to say that within another 5 years everybody who can pay for it will be able to own a mobile phone and satellite oriented Internet. Think about what this means for geography teaching. Students can send an email at any time, to anyone, anywhere in the world. Inside and outside of school, they have at their finger tips a lot of geographical facts and concepts, as well as, correlating satellite images, maps, and videos. The possibilities of manipulating data and handling information in an interactive way will take a big step forward. Unknown opportunities will open up” (van der Schee, 2003). Nowadays, we can easily see that more and more schools provide students with internet access, and, furthermore, that it is quite common for students to use high-tech digital cellular phones with cameras. Because of the number of students with camera phones, the potential for gathering pictures and movie clips in geographical fieldwork by the students is monumental. In addition to real fieldwork, virtual excursions to all kinds of places can be made possible using the search engines Google and Google Earth. All of these various aspects open up new opportunities in geography teaching, and this is just the beginning. The digital revolution has just started.

However, simply providing students and teachers access to new technologies is unlikely to transform educational practice. Effective professional development must be combined with the use of web-based resources including activities that motivate, focus, support, and sustain teachers’ participation (Stone Wiske, Sick & Wirsig, 2001). Research in this field is scarce, however. Web-based communities composed of students of geography using new technologies are a great resource for students to share both innovations in their scholastic and field practice, as well as, research results. The Commission on Geographical Education of the International Geographical Union is a good platform to start such a digital community. Effective methods for implementing the use of new technologies in geographical education should be made available on a free website as well as on the site for the International Geography Olympiad. Exchanging ideas and reflecting on the quality of geographical teaching should be top priorities of geographical organisations.

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DANIELLA TILBURY & DAVID WORTMAN

GEOGRAPHY AND SUSTAINABILITY THE FUTURE OF SCHOOL GEOGRAPHY?

INTRODUCTION

Geography's relationship with environmental education has been an important theme in education since the 1970s, sparking ongoing debates about the positioning of environmental education in the school curriculum. Such debates have explored both the content and process of environmental education, and whether or not it should be a separate course or a cross-curricular theme (Gough, 1997). Innovations in the field have increasingly moved environmental education away from being a sub-set in geography and science syllabuses towards becoming a broader cross-curricular theme in schools (Gough, 1997). More recently, however, "whole-school" approaches to environmental education have created new opportunities for developing synergies between sustainability and geographical education, both inside and outside the formal curriculum, to explore human-environment relationships.

Underpinning such debates is a re-examination of the effectiveness of environmental education over the last thirty years. Even after decades of education, international surveys of environmental education programme outcomes have found that the environmental knowledge of students is still generally low and largely science-based, lacking the deeper understanding of the social, cultural, and political dimensions of environmental problems. Studies have also found that while programmes were achieving some positive outcomes, students expressed pessimism about the future (Rickinson, 2001). Such findings highlight the need to re-examine the fundamental assumptions and frameworks underpinning environmental education programmes and their effectiveness in engaging students to participate in creating a more sustainable future.

This growing need is reflected in the United Nations Decade in Education for Sustainable Development (2005–2014), which is leading many countries such as Canada, the United Kingdom, and New Zealand to embrace the challenges of sustainability by developing national frameworks to guide the reorientation of education. In this reorientation, some governments are explicitly recognising the relationship between geography and sustainability in the school curriculum (Environmental Audit Committee, U.K. House of Commons, 2005). International conferences such as the Earth Summit and World Summit on Sustainable Development have also highlighted the increasing focus on sustainable development and sustainable living, triggering a re-examination of how best to locate these issues in the school

curriculum. Intergovernmental meetings such as the 2000 World Education Forum have also highlighted the need to reorient school curriculum structures to increase support for learning for sustainability (UNESCO, 2000).

This chapter explores some trends in environmental education and education for sustainability, and it discusses the potential future relationships between sustainability, geography, and the larger school curriculum. It explores key programme areas and themes in environmental education, including those where change is taking place and those with future potential to contribute to education for sustainability. It also highlights how and where geography can play a role in reorienting education and contributing to change towards a more sustainable future.

THE CHANGING FACE OF SUSTAINABILITY IN EDUCATION

The formal education sector has been a focus for change towards sustainability since as early as the 1970s and 1980s (Henderson & Tilbury, 2004). Early educational initiatives sought to establish new roles for schools in their communities and society beyond traditional classroom-oriented pedagogies through projects such as “greening” of school grounds. Such programmes extended learning beyond classroom walls to incorporate experiences in the “outdoor classroom”, focusing on elements such as the physical landscape, the built environment and the community. Early evidence of this shifting emphasis of education programmes emerged from programmes in the United Kingdom, Europe and North America (Henderson & Tilbury, 2004). Programmes such as the U.K.’s *Learning Through Landscapes*, Canada’s *Evergreen*, and the Environment and School Initiative’s (ENSI’s) *Learnsapes* all provided new approaches to learning through environmental experiences (Learning Through Landscapes, 2003; Evergreen, 2000; ENSI, 2004).

Building on these early initiatives, the last decade has witnessed a substantial movement worldwide to expand environmental education programmes, and to focus on reorienting school infrastructure, management and curriculum to create more holistic learning environments and engage learners in action towards sustainability (Pedersen, Dymont & Tilbury, 2004). New programmes have emerged in response to heightened global calls to reorient the management and practice of formal education to address issues of sustainability (United Nations Conference on Environment and Development (UNCED), 1992; United Nations Educational Scientific and Cultural Organisation (UNESCO), 2002).

Underpinning this reorientation is a pedagogy focused on education *for* sustainability. It is an approach that diverges from traditional school strategies that have focused on raising awareness “about” the environment and providing positive experiences “in” the environment. The premise behind such traditional approaches has been that raising awareness of environmental issues would lead learners to take action to protect or improve the environment. Recent research, however, has shown that raising awareness and providing experiences in the environment are alone not sufficient to lead learners to take action towards a more sustainable future (Fien &

Tilbury, 2002). The 1992 Rio Earth Summit and Agenda 21, and the subsequent 2002 World Summit on Sustainable Development support the reorientation of the role of education in addressing sustainability (UNESCO, 2002). Several other international documents have reinforced this shifting of focus from environmental education to education for sustainability, including the Tbilisi Declaration, the Dakar Framework for Action, and the 2004 United Nations Economic Commission for Europe (UNESCO-United Nations Environment Programme (UNEP), 1978; UNCED, 1992; United Nations Economic Commission for Europe (UNECE), 2004).

Education for sustainability is about shifting the focus from “what to teach students” to envisioning schools as a place where students, adults and the community interact and learn together (Henderson & Tilbury, 2004). It involves reorienting traditional classroom approaches to more student-centred and interactive, enquiry-based approaches to teaching and learning (Fien, 2001), as well as changing school structures (Sterling, 2001). Important aspects of pedagogy in education for sustainability include encouraging learners to explore questions, issues and problems of sustainability actively in contexts relevant to them and their communities. It provides space for learners to envision positive futures rather than focus on negative aspects of sustainability problems, and to reflect critically on current lifestyles to make more informed decisions (Tilbury, 2004). It engages learners in participation and action, providing opportunities for adults and students to interact, learn and take action towards sustainability together, and to explore more complex social issues such as human rights, equality, peace and politics. It is based on the premise that reorienting society towards sustainability will require citizens with critical enquiry and systemic thinking skills to deal with today’s complex sustainability issues (Huckle & Sterling, 1996; Sterling, 2001; Fien, 2001; Tilbury, Coleman & Garlick, 2004). Education for sustainability creates opportunities for students and the wider community to learn together through partnerships, participation and action to work towards a more sustainable future.

PARTICIPATION AND ACTION

In the mid-1980s, pedagogical approaches in schools began to shift away from educating about the environment as action-oriented objectives began to feature in environmental programmes centred around education for the environment (Linke, 1977; Lucas, 1979; Linke, 1980; Greenall, 1981). The work featured in the UNESCO-UNEP International Environmental Education Programme in the 1980s and 1990s had a strong focus on problem solving as the basis for environmental action, providing opportunities for students to identify and investigate issues, as well as develop solutions (Winther, Volk & Hungerford, 1994).

Education for sustainability is again pushing pedagogical boundaries, challenging school environmental education programmes to shift away from single actions, such as planting a tree, toward student participation in decision making. Such broader action-oriented approaches are increasingly featuring in environmental

education programmes, particularly over the last ten years. Embracing the theory that environmental education should include an active participatory process in problem solving, these approaches are encouraging students to be reflective about and responsible for their actions in the environment (Hungerford et al., 1990; Hungerford et al., 1992; Winther, Volk and Hungerford, 1994). The active participation of students is encouraged through promoting democratic learning and decision-making, facilitating dialogue, giving students ownership of projects, and instilling a deeper and more collective understanding of issues and actions (Janse van Rensburg, 2000). The sustainability literature recognises the importance of such democratic decision participation and engagement in decision-making to move towards an improved quality of life (UNCED, 1992; UNESCO, 2002). Other elements recognised as important in action learning are equity, sharing, listening, cooperation, collaboration, and futures thinking (Wilson-Hill, 2003), which are closely linked to learning for sustainability (Tilbury, 1995; Fien & Tilbury, 1998; Tilbury & Henderson, 2003).

Most of today's problems of sustainability are also highly complex and cannot be solved, but rather lessened, testing the limits of problem-solving approaches. This complexity requires that students understand the limits of applying simple "cause and effect" analysis to issues. This incomplete understanding of the complexities of problem-solving actions can often lead to "action paralysis", discouraging students from engaging in sustainability issues (Jensen, 2002). Programmes like the U.K. World Wide Fund for Nature (WWF-UK) *Linking Thinking* programme help learners to explore this complexity through cultivating systemic thinking skills (Sterling, 2002).

Action-oriented approaches are being built around real and simulated action including negotiation, persuasion, political action, ecological management, and patterns of consumption (Tilbury, 1995). Programmes like the Organisation for Economic Cooperation and Development's (OECD's) Environment and Schools Initiative (ENSI) have contributed substantially to reorienting school programmes towards action-centred learning. The programme supports a constructivist approach to learning, engaging students in actively building knowledge by constructing their own understanding of environmental and sustainability issues, thinking independently, critically reflecting on the multiple dimensions of issues, and taking control of their own actions (OECD ENSI, 2000). Such approaches also help to cultivate a sense of responsibility in action taking.

Danish researchers have developed similar action competence frameworks that have challenged environmental educators to consider the role of democratic decision-making in learning, the need for understanding the context for action, and the development of action taking skills (Jensen & Schnack, 1997). This framework is characterised by learner choice, reflection, and decision-making in student participation for change (Jensen & Schnack, 1997; Breiting & Morgensen, 1999).

While there are strong theoretical elements of action-oriented approaches as they relate to educational, social, and political dimensions of sustainability, theory is diluted in school practice. Many action-oriented school programmes omit the opportunity for self-reflection and choice, instead replacing it with pre-determined actions. Similarly,

investigations by Wilson-Hill of schools in New Zealand found that while elements of participation were evident in practice, they were often limited by teacher understanding of participatory learning processes and the capacity to apply these processes (Wilson-Hill, 2003). Such studies highlight the need to build the capacity of teachers to move the sustainability agenda away from single actions toward participation and action using participatory pedagogies as a next step in education for sustainability (Wilson-Hill, 2003).

EXPERIENTIAL AND ACTION LEARNING

There are considerable positive trends in the areas of experiential and action learning in school curricula that are featuring prominently in the geography curriculum. It is an area that is slowly growing but one that holds great promise, moving away from teaching focused on experiencing the environment “for its own sake” towards experiences tied to actions for change towards sustainability.

Outdoor experiences that provide students with direct contact with the natural and physical environment have been key components of environmental and geography education in schools. The work of Van Matre and others (Van Matre, 1979; Van Matre, 1990; Van Matre & Johnson, 1988) as well as Cornell (Cornell, 1978) provides a long tradition of incorporating outdoor experiences in environmental education programmes in schools. Environmental education centres and outdoor classrooms have played a key role in building awareness of the environment and instilling in students a sense of “wonder” of nature. Some environmental educators argue that significant experiences in the environment are important in developing attitudes and sensitivities toward the environment (Chawla, 1988; Palmer, 1993; Palmer & Suggate, 1996; Tanner, 1980; Tanner, 1998a; Tanner, 1998b).

Such research has been criticised for several reasons, including its focus on environmental activists and older generations, its lack of gender and cultural considerations, and the ambiguous way it considers the natural environment (Gough, 1999; Payne, 1999). There are still many questions about the claim that experience in the natural environment leads to positive action for the environment (Gough A., 1999; Gough, N. 2002; Gough S., 1999; Payne, 1999), and there is little empirical evidence to link experience in the environment with change for sustainability.

Some studies have suggested, however, that experiential *learning* leads to greater awareness, ownership, and empowerment of learners, which encourages students to test and evaluate ideas in practice (Law, 2003). Distinct from experience in the environment, experiential learning may or may not include direct experience with the natural or physical environment. Rather, it is a process of challenging student values, attitudes, and practice by encouraging active reflection on the learning experience itself. Experiential learning involves students in four phases, including engaging in an action or experience, processing the action, understanding the general principles behind the action and its effects, and applying the principles to a new situation (Kolb, 1984).

Sometimes referred to as “action learning”, these components usually address a specific issue or focus by working with others (Antonacopoulou, 2002; Beaty, 1999; Zuber-Skerritt, 2002). Action learning involves students in cycles of critical questioning and reflection, commits students to a change outcome, and gives them ownership over the learning experience (Henton et al., 1979). Certain aspects of action learning can contribute to the social action outcomes in environmental education aligned with the principles of education for sustainability (Kolb, 1984; Law, 2003). These elements include reflection, connection to personal experience, emotional engagement in learning, and student-centred approaches to teaching and learning. Research shows that combining these characteristics can lead to higher student interest, motivation, and enthusiasm for participating in social action (Law, 2003). Experiential learning may also help to diffuse the despair students may feel when they understand environmental problems but feel powerless to change them (Orr, 1999).

ENVIRONMENTAL EDUCATION CENTRES

Almost all geography curricula involve field trips or visits to environmental education centres, and such centres around the world provide significant influences on educational practice and educational opportunities for student groups of all levels. Fieldwork is an integral part of the geography school curriculum in many countries and is important for developing geographical knowledge and skills. Originally established as a focus for such field study, environmental education centres have provided practical learning experiences in the environment, particularly for the geography curriculum.

Early approaches of environmental education centres were characterised by education “about” and “in” the environment, focusing on classification of plants, wildlife, and other elements of the natural environment (Government of Queensland, 2003; New South Wales Government, 2002). The programmes of many such centres were built around the teaching tools of the Institute of Earth Education, which seeks to address human relationships with and impacts on the environment by connecting students personally and even spiritually with the environment (Institute for Earth Education, 2001). Some critics, however, point out that such approaches focus on changing negative personal actions and individual behaviour without considering the historical, social, or political context of individual actions (Gough, 1997). Gough (1997) suggests that environmental education needs to move away from such “blame the victim” approaches towards a focus on more critical thinking and collective action.

Over the years, environmental education centres have in fact widened the range of issues they address, the pedagogies they employ, and the support they provide for teacher training and school curricula. Some centres have broadened their focus to examine interrelationships between the natural, built, and social environments. Environmental education centres are increasingly embracing the wider issues of sustainability by incorporating, for example, ecological “footprinting” as a measure of human impact on the environment. Footprinting helps students understand how

much productive land and water nations, regions, or individuals require to produce resources for consumption and dispose of waste (Wackernagel & Rees, 1996).

Others centres are actively involved in designing teaching materials, and advising schools on environmental and sustainability education issues (Government of Queensland, 2003; New South Wales Government, 2002). Some centres have adopted enquiry-based approaches to learning focused on environmental management issues, encouraging students to question and respond to their own concerns through not only investigation, but action (Gough, 1993). The enquiry-based learning process is negotiated between learner and teacher and involves identifying an issue, formulating questions, developing a process for investigation, and processing and communicating findings. Moreover, it involves student participation in decision-making to identify actions as well as joint student and teacher reflection on the outcomes.

Finally, environmental education centres are creating partnerships with communities to participate in addressing local sustainability issues. This new role, which many centres now view as a critical component of their functions, is helping environmental education centres to play an important role in community education in the process. In Australia, for example, some education centres in New South Wales are assisting in implementing school management plans (New South Wales Government, 2001a). Such partnerships help students to engage with the broader community, which is a key a component in change for sustainability.

CRITICAL THINKING AND SUSTAINABLE CONSUMPTION

Environmental and sustainability educators are also pushing schools, particularly in developed nations, to address the complex issues behind consumption patterns. A world that is increasingly shaped by a global consumer culture is shaping the dreams, identities, and expectations of the next generations of students, replacing in these students' lives the past roles of institutions such as schools and places of worship. Some students today identify more with powerful multi-national brand names, that offer a sense of identity by appealing to emotions and desires (Kenway et al., 2003). The powerful dynamic of globalism and consumerism, including advertising and the internet, raises important issues and challenges for environmental and sustainability education (Kenway et al., 2003).

These new social culture and global consumption patterns highlight the need to cultivate in students competencies in critical thinking and reflection (Abraham et al., 1990; Huckle, 1990; Pepper, 1990; Fien, 1993; Tilbury, 1993; Tilbury, 1995; Huckle & Sterling, 1996; UNESCO, 2002; Tilbury, 2003; Tilbury, 2004b). Many environmental educators argue that critical reflective models are needed to help students understand the "cultural lens" that shapes their worldviews (UNECE, 2004). Critical thinking helps students to see deeper than cosmetic attraction to ask critical questions about global-local links and the effects of globalisation on culture (Kenway et al., 2003; Tilbury, 2004b). Through this process, students can also be challenged to question the power and inequalities that shape the global order that impacts students' daily

lives (Fien, 1993; Tilbury, 1993; Huckle, 1996; Sterling, 1996; Huckle, 1997; Tilbury, 2001). Critical thinking along with opportunities to clarify their own values can help students understand their thoughts, feelings, and commitments to enrich their self-awareness and understand that other cultural perceptions exist (Tilbury, 2004b). Critical thinking can also encourage students to explore how the media portray and transmit images about nature and our relationships to it.

While critical thinking, reflection, and values clarification have had a presence in the geography curriculum since the 1980s (Fien & Gerber 1988; Huckle 1983), examples of such programmes in school education are unfortunately rare. The geography and learning for sustainability curriculum can play a role in providing such opportunities so that students can examine their lifestyles and practical ways of linking daily choices with environmental quality and sustainability.

CITIZEN SCIENCE

Citizen science is a participatory learning process that emerged from the United States to address public mistrust of “expert-oriented” approaches to the collection of scientific evidence and challenge the role of scientific institutions in addressing risk in society (Leach & Fairhead, 2002). It is an attempt to take science “out of the laboratory” and into a wider social context (Leach & Fairhead, 2002). It is also an approach with elements that are in alignment with both Agenda 21 and the World Summit on Sustainable Development Implementation Plan, that recognise the importance of democratic participation and redistribution of power as keys to a more sustainable world (UNCED, 1992; UNESCO, 2002).

Citizen science is grounded in sound scientific research, focusing on participation, adaptive management, and democratic skills for an active civil society. Students can share data internationally for scientific research and use it to raise awareness and concern among government, resource agencies, business, and the broader community (New South Wales Government, 2001b; Sydney Water, 2002; Penuel & Means, 2005). Data can also be returned to partnering organizations, including government agencies and non-governmental organizations. By building understanding and support for scientific knowledge, citizen science is also helping to re-orient science toward addressing the complexities of sustainability (Backstrand, 2002). In doing so, it is creating a process of social learning involving both students and the community (Coastal Zone Australia, 2003).

School-based approaches to citizen science involve students in collecting scientific information such as data on water quality, air quality, and biodiversity. Such programs allow students to retain and act on data, offering them a sense of belonging and ownership of the generated knowledge (Coastal Zone Australia, 2003). These approaches are another reflection of how schools are increasingly recognising the importance of student ownership and control over learning and engagement in community processes for decision-making as keys to moving towards a more sustainable future (Damme, 1998; Tilbury, 2003).

The Global Learning and Observations to Benefit the Environment (GLOBE) programme is one example of a citizen science education program, involving students in more than a hundred countries. Participating students focus on a key area of investigation, measuring key physical, chemical, and biological properties in their local environment. Findings are entered into an online database accessible to schools and scientists around the world. Students can access data for further classroom studies, research, and global school-to-school collaboration. Scientists have used GLOBE data to understand current environmental issues and emerging trends (University Corporation for Atmospheric Research-Colorado State University, 2004 Penuel & Means, 2005).

While such programmes encourage students to participate in and explore locally relevant issues of sustainability, they are underpinned by an assumption that raising awareness about the environment will result in change for sustainability (Ramsey & Rickson, 1977; Lucas, 1979). Only a small number of schools, however, are using citizen science to motivate community action towards sustainability, and many do not provide the skills to do so (Penuel & Means, 2005). While some students may in fact be inspired to act on their findings, they are often not provided with an understanding of the complexity of environmental issues or the skills to participate in decisions and actions for change towards a more sustainable future. Such elements are instrumental in increasing student competencies to participate in the change process (Webler et al., 1995; Lyons et al., 2001). While citizen science approaches hold significant promise in learning for sustainability, schools will need to develop participatory approaches integrating science with social, cultural, and political dimensions as well as decision-making and action to contribute to future change towards sustainability.

ADJECTIVAL EDUCATION

Adjectival education is a term that describes other areas of learning such as citizenship education, futures education, global education and multicultural education. Adjectival education has the potential to broaden the scope of environmental issues taught in schools and challenge traditional structures of subject areas in the geography and wider school curriculum.

Adjectival education offers substantial potential to empower youth to participate in shaping their future and promoting change towards sustainability. It promotes cross-curriculum learning by exploring linkages between society and environment, global and local issues, politics and power, and intercultural perspectives (Tilbury & Henderson, 2003). It advocates skills for participation and decision-making in society, underpinned by the socially critical paradigm, which is closely linked to learning for sustainability (Tilbury & Henderson, 2003).

Adjectival education is characterized by active learning approaches such as critical reflection, holistic learning, values clarification, experiential and enquiry-based learning, dialogue, empowerment, and intercultural understanding (Tilbury & Henderson, 2003). Examples of adjectival education include

- *Global education*, which re-focuses what is taught about other countries and cultures in the geography and wider school curriculum to “problematise” existing content, question power and inequalities shaping the international order, explore local-global connections and resource allocation, and understand the dimensions underpinning global patterns of poverty and wealth;
- *Futures education*, which involves cultivating in students an appreciation that they have a choices in shaping alternative futures, providing them with new ways to think about and examine values and assumptions behind different views of the future;
- *Multicultural education*, which promotes social cohesion, tolerance, equality, freedom of expression, and social and economic equity, ensuring that students have the skills and values to participate successfully in a diverse society; and
- *Citizenship education*, which promotes participatory and reflective learning from a holistic perspective with an examination of cultural, political, economic, and social dimensions. It involves a commitment to democracy, social justice, and responsibility (Tilbury & Henderson, 2003).

Education for change, including adjectival education, is still not a widespread practice. For example, in countries like Australia, intercultural perspectives and indigenous knowledge associated with multicultural education is still largely absent (Tilbury, Coleman & Garlick, 2005). Adjectival education, however, has a tremendous potential to broaden the scope of environmental and geographical education from a focus on single actions such as waste reduction, planting trees, or improving school grounds to encompass a deeper understanding of the social, economic, and cultural contexts underlying environmental issues.

ACTION RESEARCH

Action research has held a strong presence in the environmental education literature since the 1980s. While focused largely in the science curriculum, it offers great potential in applications to the geography curriculum. Action research engages both students and teachers in an active and participative learning process, focusing on continual cycles of critical reflection aimed at creating change. Students and teachers collaboratively identify an issue of sustainability, develop research questions and an action plan, and act on the plan, observing and reflecting critically on both the research process and outcomes aimed at creating change (Kemmis & McTaggart, 1982; Carr & Kemmis, 1986; Elliott, 1991; McKernan, 1996; Tilbury, 1999; Janse van Rensburg, 2000). Action research enables students and teachers to engage with real issues of sustainability while developing essential skills to address such issues (Robottom, 1987a; Huckle, 1991; Tilbury, 1995). Its continuous cycles of action and reflection challenge linear models of learning that start with and primarily focus on knowledge (Tilbury, 1995). In contrast, action research focuses on environmental improvement or change for sustainability as the end goal of the education process (Tilbury, 1995).

Action research has helped to focus environmental education in schools on the issues of curriculum improvement, and action-oriented practice, integrating concepts of student empowerment and actions for change (Greenall-Gough & Robottom, 1993; Tilbury, 1995; Wals, 1996; Tilbury & Turner, 1997; Janse van Rensburg, 2000). It also offers a holistic and interdisciplinary approach and recognises the political interests underpinning sustainability issues (Tilbury, 1995). It has challenged the role of the teacher, shifting roles from one as a disseminator of information towards a teacher-student relationship of mutual enquiry and respect (Greenall-Gough & Robottom, 1993).

One such action research project is South Africa's Schools Water Project. The project demonstrates the potential for applying action research in the geography curriculum by helping to connect students with their community and the environment (Schrueder, 1994a; Schrueder, 1994b; DeLange & Schrueder, 1996; Schrueder, 1997; Tilbury, 1999). Established in 1992, the programme engages students in action research to improve the quality of local catchments while simultaneously challenging teachers to reflect on and improve their own teaching practice. It has not only raised awareness about sustainability issues among students, but also mobilised action including cleaning of catchments, reducing pollution from agriculture, and increasing community involvement in natural resource management (Tilbury, 1999). Other programmes like OECD's ENSI promote action research as a way to cultivate dynamic qualities in students and involve the wider community in change for sustainability (OECD ENSI, 2000).

PARTNERSHIPS

Partnerships reflect another growing trend in the shift from environmental education towards education for sustainability. The importance of cross-sectoral partnerships featured prominently in Agenda 21 (UNCED, 1992), and one of the guiding principles of the World Summit on Sustainable Development Plan of Implementation is the enhancement of partnerships between government and non-government stakeholders to achieve sustainable development at all levels (United Nations, 2002). The United Nations Decade in Education for Sustainable Development locates partnerships at the core of its Implementation Plan (UNESCO, 2003).

While the concept of partnerships is not new to education, the sustainability agenda is reshaping the nature of such partnerships, fostering partnerships for change based on participation, ownership, shared decision-making, and common visions (OECD, 1995; Richardson, 1998; Ramaswamy, 2001; Juniper and Moore, 2002; Prahalad and United Nations 2003). Partnerships can cultivate the sharing of learning experiences and accelerate the process of change towards sustainability (Tilbury, 2004a). Partnerships for sustainability go beyond simply working together to challenge the world views and assumptions of each partner (Tilbury, 2004a).

Partnerships feature strongly in national sustainability policies and strategies around the world and are emerging in education and learning for sustainability frameworks

(Department of Environment and Heritage, 1992; National Environmental Education Committee, Jamaica, 1998; Government of Canada, 2002; Institute for Global Environmental Strategies, 2002; Department of Education and Skills, UK, 2003; Parliamentary Commissioner for the Environment, 2004). England's Sustainable Development Action Plan for Schools specifically identifies key stakeholders and partners to assist schools in achieving sustainability (Department of Education and Skills, UK, 2003). Similarly, the Canadian Environmental Education Strategy calls for support for the creation of partnerships between and among educators, governments, non-government organizations, institutions, and the private sector (Government of Canada, 2002). While institutional support for such school partnerships is growing, there are still many factors that inhibit them, including legalities, policy contradictions, and funding and resource issues.

A WAY FORWARD

Making progress towards sustainability will require engaging students and adults at all geographical and cultural scales, including nations, regions, towns, and communities. This process will be vital to changing wasteful patterns of consumption in the developed world and addressing sustainability in the developing world (UNESCO, 1997). Education is no longer seen as an end in itself, but rather as a key instrument for bringing about changes in knowledge, behaviour, lifestyles, and values required to achieve sustainability (UNESCO, 2002).

Similarly, geography has evolved from the study of landforms to a means of engaging in and understanding change in our landscapes and communities (Tilbury, 1997). Early efforts at incorporating sustainability in the school curriculum took interdisciplinary and then cross disciplinary approaches, where geography made significant contributions. Now, as school curricula evolve towards "whole school" approaches, geography is again positioned to be instrumental in developing student-centred, action-oriented approaches to transform school education into a genuine learning experience for sustainability.

Whole school approaches that involve staff, students, and the community in change towards sustainability provide significant promise in reorienting education towards a more sustainable future. Such approaches encourage schools to consider their pedagogy, curricula, infrastructure and management policies in light of sustainability principles and processes. Associated programmes are shifting approaches to environmental education from singular, teacher-led, knowledge-centred activities to student-centred, action-oriented and systemic approaches to learning for sustainability. Partnerships within and beyond the school community are helping to guide both schools and communities towards change for sustainability.

To foster this change, educators will need the capacity in learning for sustainability approaches, and schools will need the resources to strengthen whole school approaches and strategic networks (Tilbury, Coleman & Garlick, 2005). Reorienting school education is a costly and large-scale endeavour, requiring a fundamental shift in school

practice. But in its success lies a future generation with the knowledge, capacity, and motivation to shape a more sustainable future.

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JOHN MORGAN

DISCERNING CITIZENSHIP IN GEOGRAPHY EDUCATION

INTRODUCTION

Citizenship is currently riding high on political and social policy agendas, in the UK and elsewhere. In 1990, the UK Commission on Citizenship recommended that citizenship be part of each individual's education. More recently the UK government's Advisory Group on Education and the Teaching of Democracy in Schools (1997) recommended that citizenship education be a statutory part of pupils' educational entitlement, to be accompanied by specified learning outcomes. This has led to the establishment of Citizenship as a discrete 'subject' in the National Curriculum for England. This may lead readers to wonder why to devote a chapter to the relationship between citizenship and geography education. However, geography educators have been keen to stress potential links. For instance, Stoltman (1990) begins his monograph *Geography Education for Citizenship* with the statement that "Compelling arguments can be made for why geographic education complements citizenship" (p. 1). Stoltman is fairly typical of geography educators who write about citizenship in that he seems to assume that citizenship is a neutral term – phrases like 'informed citizen' seem to be taken at face value, and there is very little discussion of the contested nature of the concept.¹ This type of approach is an example of what Smith (1998) calls "cerning", which describes a process whereby attempts are made to draw boundaries around concepts and ideas in order to reduce their complexity and deny differences in interpretation. 'Cerning' is the opposite of 'discerning', which means to identify and stress the different interpretations that exist. There have been some recent discussions of the relationship between citizenship and geography education that have been more discerning, most notably in Machon and Lambert's (2001) edited collection *Citizenship Through Secondary Geography*. Many of the contributors to that book were guarded in their embrace of citizenship. They were sceptical of the idea that citizenship could simply be 'delivered' through school geography and stressed the complexity of the term itself. In this sense, these contributors were suggesting that citizenship was under construction – it was being produced under new conditions, specifically in the context of the political conditions produced by globalisation. My own contribution to that volume took up this idea as geography playing its part in the construction of citizenship. I argued that school geography provides students with simplified and plausible answers to the question, posed by Harvey, "to which space do I belong? Am I citizen of the world, the nation, the locality?" In educational terms,

this is similar to Ross's (2000) argument that the school curriculum (traditionally under the supervision of the nation-state) serves as a 'narration of the nation' and that school subjects are involved in defining who 'we' are, and what 'our' society is. More specifically

The subject of geography necessarily defines social space and territory, given its concern with boundaries (national and physical), zones of activity and notions of regionality these are inevitably part of the process of identifying people with places, in terms of the identity and nature of a nation (Ross, 2000, p. 154).

My argument in this chapter is that these are the citizenship-type questions to which geography is able to provide some (provisional) answers. The answers it provides are by their nature 'political'. Connell (1992) argues that 'citizenship' has two faces. On the one hand citizenship appears as a principle of regulation and social order, casting citizens into standardised relations of obedience and orderliness. On the other hand citizenship stands as a claim of rights, as a demand by the excluded for access and participation. In the light of citizenship's potential for 'regulation' or 'emancipation', I insist that it is incumbent on geography educators to keep a critical eye on the types of answers to these citizenship-type questions. One final note before I begin the chapter. Readers will note that the focus is on geography as taught in British schools. There is a simple reason for this it is the field with which I am most familiar. However, the analysis I offer is more general, and I hope readers will find ways to adapt it to their own contexts.

THE GEOGRAPHY OF CONSENSUS

In the post-war period, I argue, school geography offered students relatively stable representations of space or geographical imaginations. In global terms, it was assumed that the world was divided into around 200 individual nations or states, each one striving to become more 'developed'. It was recognised that there were important differences between these nations, and that some were more developed than others, but the assumption was that they were all in the process of becoming 'modern'. This view of the world (what Taylor (1989) called 'developmentalism') was expressed by regional geography texts. These regional geographies tended to run, chapter by chapter, through the main countries or regions, or were detailed surveys of geology, minerals, soils, vegetation, industry, communications, population and trade. The concept of the region was central throughout, though there was rarely any attempt to define this. This type of regional survey was dominant in school geography in the twenty years after the Second World War and was enhanced by the greater availability of information. Such textbooks were underpinned by a particular geographical imagination; it was one based on the ordered and rational management and utilisation of the national space and resources. There was a strong focus on natural resources, primary production and manufacture. Throughout it was assumed that the state (or government) is the most influential actor.

This geographical imagination remained intact in spite of the ‘methodological revolution’ that affected the discipline in the late 1960s and early 1970s. Spatial theory and the application of quantitative techniques hastened the demise of regional geography. The search for generalisation was favoured over a concern for difference, and was expressed in various ‘models’ that assumed that each individual nation was undergoing the process of ‘modernisation’ (for example, Rostow’s ‘Stages of Economic Growth’, Freidmann’s ‘Core-Periphery model’).

The assumption of a stable, ordered, ‘modern’ space also informed the way the geography of Britain was represented in this period. It has become common to speak of the period from 1945 to the mid-1970s as one of political consensus. During this period the major political parties shared a commitment to managing the economy so as to ensure full employment, introduce policies to even out regional disparities, nationalise important industrial sectors (for example, coal and steel), and use taxation to finance the welfare state. As this implies, there was a geographical element to this consensus. Stamp and Beaver’s *The British Isles A Geographic and Economic Survey* reflected the regionalist and determinist legacies of the subject, so that their detailed descriptions of Britain’s physical resources and their exploitation could be represented with little reference to political, social and cultural factors.

These assumptions were reflected in school geography texts. For example, Graves and White’s *Geography of the British Isles* (the fourth edition of which was published in 1976) reflects the political geography of consensus. Interestingly the geography in the title might well be replaced with ‘economic geography’, since there is little in their coverage that represents other aspects of Britain’s geography (for example, social or political geography). The titles of the chapters give an indication of this “The changing distribution of industry”, “Power and raw materials for industry”, “Communications between cities and industries”, and “Food supplies for the cities”. The focus on economic geography is apparent, and within that, on the importance of ‘heavy’ industry. Primary industries such as agriculture and energy extraction are seen as the basis for secondary industries such as iron and steel, shipbuilding and chemicals. There are a number of features about the type of economy represented in the text

- the economy is dominated by the primary and secondary sectors, even though a significant proportion of the labour force worked in services;
- there is an emphasis on modern, large-scale industrial developments – students learn a good deal about the power of ‘man’ to exploit nature;
- there is a focus on how industry has developed over time – patterns of momentum and inertia;
- explanation is based on assumptions about the organisation and logic of capital and the idea of ‘economies of scale’; and
- it is taken as given that the state is and should be involved in the organisation of the economy.

Geography of the British Isles portrays a planned modern economy and society, expressing a landscape designed to further a post-war social democratic consensus of

stable and harmonious class relations. What we have is a ‘solid’, modern geography based on power generation, modern mining, improving transport links, ships and steel. As such the book can be read as offering and authenticating a particular geography of British modernity (Gilbert et al., 2003).

What the text does not reveal, however, is the extent to which this particular economic geography was in the process of unravelling. What is not visible in *Geography of the British Isles* is any sense of the political and class struggles that characterised Britain in the 1970s. The economic geography represented too is linked to a specific ‘gender division of labour’ described by McDowell

In this period paid work was the prime source of identity for men who, in their role as breadwinners, were expected to support their dependents, usually women and children. This world was one of relative stability (2003, p. 98).

Finally, there is little sense of the impending environmental crisis in the text. For instance, the modern reader would raise an eyebrow at the following optimistic assessment of the potential for fish farming

The high temperatures of water due to the effluent from power stations have been found to cause fish to grow much more rapidly than normal in almost tropical conditions. Pilot schemes are being carried out in Carmarthen Bay and also by the nuclear power station at Hunterston in Scotland (1976, pp. 273–4).

Geography of the British Isles can be read as a simplified representation of what Martin and Sunley (1997) call the “space economy under the Keynesian Welfare State”. There are a number of features to this. First, the national economic space is the essential unit of economic organisation. It is assumed that the state (government) is the sovereign actor. Secondly, the state acted to secure a high degree of spatial centralisation of the domestic economy. Thirdly, the state sought to be spatially redistributive and stabilising. These assumptions underpin the discussion of Britain’s industrial problems in the text. For example, the comment that “Governments have attempted since 1945 to encourage firms to set up new factories in areas where old industries are declining” is presented without discussion in the book. Overall, the feeling one gets of reading this text thirty years on is one of significant change.

In summary, in this section I have suggested that in the thirty or so years after the Second World War, school geography served to define social space and territory in particular ways. It offered students a particular construction of citizenship, a ‘map of meaning’ through which they could comprehend their place in the world and a set of pointers for the future. Looking back at some of the texts used to support teaching in the subject, we cannot help but get the impression that the subject seemed less complicated, less controversial, and less political. To understand how that changed, we need to examine the changes that occurred in the subject after 1980.

THE POLITICAL GEOGRAPHIES OF CRISIS

In this section I argue that the last quarter of the twentieth century saw important shifts in the nature of global capitalism that unsettled many of the assumptions upon

which school geography was based. I call this the 'political geography of crisis'. One of the important effects of this has been that it is (or should be) impossible to talk of a singular geography. Instead, we need to talk about multiple geographies. There is a tendency to see this as the outcome of a fashionable 'postmodernism' that allows us to 'pick and mix' our approaches. However, to think about it in these terms is to miss the obvious (but crucial) point that geographical knowledge is produced with particular political imaginations in mind and reflects particular social and economic conditions. In simple terms, this section suggests that the 'stories' that school geography offered about space and place in the post-war period were no longer credible.

The most important impetus to the shift from geography to geographies was a loss of faith in the grand narrative of 'development'. Perhaps one of the most striking images of the post-war period was that of starving African children in the Sahel famine of the early to mid-1980s. It was this more than anything else that brought home the realisation that the paths to development that were mapped out for the nations of the developing world had not led to substantive improvements in the quality of lives of the world's poorest. In this context, geographers realised that the equation 'modernisation = westernisation = progress' was no longer credible. There were four elements to this. First, geographers increasingly accepted arguments about 'the development of underdevelopment'. Associated with the work of A.G. Frank, this asserted that underdevelopment could no longer be viewed as an original condition it was the result of the incorporation of colonies and independent nations into a world economic system weighted heavily in favour of the rich countries. Secondly, there were important shifts in the meaning of 'development'. Whereas previously development had meant economic growth and it was assumed that the benefits of economic growth would 'trickle down' to regions, development was gradually redefined as a more complex entity and came to include non-material 'quality of life' objectives such as self-determination, self-reliance, political freedom, participatory decision-making. Thirdly, the particular problems of individual developing countries were subsumed by the world context and shared problems of scarcity. These included the notion of an interdependent world sharing common environmental problems and constraints such as energy and resource limitations, pollution and environmental degradation. Finally, the consistent failure of development programmes to improve substantially the well-being of the world's poorest people led to a profound shift from optimism to deep pessimism about the project of development.

These developments had a profound effect on geographers, who increasingly came to recognise that the scale of explanation had shifted to the global. In his recent book (2005), *A Brief History of Neoliberalism*, Harvey argues that the late 1970s is likely to be remembered as a pivotal time in the history of post-war capitalism. He suggests this can be reflected in the role of three key figures – the death of Mao Zedong in 1976 and the subsequent installation of Deng Xiaoping, who began the process of opening China to the global market, the election of Margaret Thatcher in Britain in 1979 and then Ronald Reagan in the United States in 1980 – who ushered in a period of neoliberalism. Harvey argues that these events were precipitated by an economic crisis caused by a fall in the rate of profit. In the face of this there really did appear to

be the possibility of radical social change and the shift to the right – which involved the supposed rolling back of the state and the re-assertion of ‘the market’ – was part of an attempt to redistribute wealth to the capitalist class. Part of this involved the restructuring of global capitalism, and this was reflected in the work of geographers. For example, Johnston and Taylor’s *A World in Crisis* argued that it was necessary to understand economic, political and demographic issues as manifestations of global processes. Taylor’s *Political Geography* (sub-titled world-system, nation-state and locality) drew upon Wallerstein’s World-Systems theory to analyse the relationship between the scales of the global, national and local, and Corbridge (1986) whose *World Capitalist Development* sought to understand the continued underdevelopment of the ‘Third World’. Indeed, through the 1980s and 1990s events were increasingly understood in the context of globalisation exemplified by Dickens’ *Global Shift* (now in its fourth edition but first published in 1986).

How is this account pertinent to our understanding of the ways in which school geography represents space? Quite simply, the challenge of ‘anti-development’ and the shift towards a global scale of analysis challenged the assumptions about the nature of space and the supposed neutrality of geographical knowledge. The breakdown of political consensus about the prospects for development meant that educators had to make decisions about how to represent these issues to students. The political nature of geographical knowledge cannot be avoided.

These issues also confronted those involved in representing the geography of Britain in the 1980s. At a time when the divisions between people and places within Britain could hardly be missed, the claims to neutrality upon which many geography educators based their professionalism were challenged. It may be possible to date the much-vaunted division between academic and school geography to this period. Many human geographers began to place the relationship between capital and labour in particular historical formations at the heart of their explanations. For example, in his book *The Urban Arena* Short (1984) described the response of capital to the end of the post-war economic boom. These included first, not investing – since profit levels were falling one response was to not invest in manufacturing. Secondly, invest abroad. Thirdly, firms sought to restructure their activities. This involved reducing labour costs through cutting employment, increasing productivity by introducing harsher labour practices, and concentrating investment in the cheapest locations. By its very nature, restructuring implies a change in the relationship between capital and labour. Fourthly, capital sought to re-direct the activities of the state. This involved directing government taxation and expenditure, encouraging the ‘right’ climate for industrial relations, and creating more business for private industries. Short’s book is upfront about the political conflicts at the heart of these changes and is not untypical of the response to this changed landscape by many geographers in the UK. Mohan (1999) suggests that there were three influences that led to changes in the nature of academic work on the UK’s human geography. These were the growing influence of radical ideas, drawn from Marxist economic and political theory; the onset of recession that posed a challenge to earlier accounts of economic geography – the old ‘location factors’ approach was not sufficient to understand the new conditions; the

1979 election result represented a decisive break from the politics of 'one nation'. Throughout the 1980s geographers published a series of texts that sought to describe and explain these changes, and many took on a critical edge, seeking to understand the ways in which the restructuring of capitalism and the state impacted on people and places. The chapter titles of Mohan's (1989) edited collection *The Political Geography of Contemporary Britain* give some indication of the concerns of geographers in that decade "Nationalism in a disunited kingdom", "The crisis of local government", "Deindustrialisation and state intervention", "The politics of race and segregation", "Women in Thatcher's Britain", and "Policing the recession".

Flint and Flint's textbook *British Issues in Geography*, published in 1989 at the end of a decade in which much of Britain's human geography had been transformed, is one of the few school geography textbooks that recognises the possibility and existence of social conflict. It is interesting to read it alongside Graves and White's book. The cover of the book tells a particular story of the decade, with photographs of a nuclear power station alongside environmental protesters and nuclear workers seeking to protect their jobs; a closed down manufacturing factory next to young people campaigning for jobs (their placard reads "Give us a future"), and a picture of arable farming next to Friends of the Earth campaigners. The preface to the text notes "*British issues in Geography* is about the forces that are changing the geography of Britain. Many factors, some of which are on a large scale and are quickly and widely felt, combine to bring about geographical change...there are precious few aspects of Britain's geography today that are not changing in one way or another, and often at a pace that has rarely been witnessed before".

The economy as represented in *British Issues in Geography* has a number of features

- the primary and secondary sectors of the economy, which were previously dominant, are in decline, leading to high rates of unemployment and community decline;
- large-scale industrial development is presented as having major impacts on the physical environment;
- the economy is shown in a state of transition, with new 'cleaner', high-tech and service sectors seen as representing the future; and
- there is a strong sense of how there are genuine and deep conflicts about how Britain's economic and social problems should be resolved.

Overall, *British Issues in Geography* reflects the breakdown of the Fordist economy based on full employment and strong consensus about the role of the state in managing the economy. It is worth noting that the book is one of the few examples of a school geography textbook explicitly acknowledging the depths of these divisions. Most geography textbooks of this period minimise the problems and stress how the problems of transformation can be solved (Morgan, 2003).

This section has discussed how, during the 1980s and 1990s, some geographers became increasingly concerned to understand the processes of change in the operations of global capitalist societies. This can be seen as a rejection of an earlier

set of approaches best described as 'location theory'. Indeed Haggett's (1965) *Models in Geography*, a major statement of the so called 'new' geography, was challenged by Peet and Thrift's (1989) two-volume *New Models in Geography* that relied on neo-Marxist political economy. This concern with political economy reflects the concern of human geographers to link with and inform wider currents developments in the social sciences. Indeed, throughout the 1990s, human geography played an important part in the so-called 'cultural turn'. It is important to remember that these developments can be understood as part of the 'post-Marxist' move in the social sciences. Very briefly, the rise of neoliberalism led to a crisis in the political left which challenged the economic determinism of the older Marxist models. The so-called 'new times' led to important shifts in the ways in which people lived. It was argued that the world had changed and that what counted as 'progressive' politics would have to engage with this new agenda, which might loosely be called the politics of identity. To give just two examples, it was increasingly recognised that people forged a significant sense of who they are through acts of consumption. This led to a concern to understand the processes of consumption. Secondly, it was recognised that places (such as cities and rural spaces) were as much formed by the social and cultural relations within them as by economic forces. This led to attempts to understand the uniqueness of places and to focus on the differences that existed between people. This concern with difference was inevitably linked to the notion of 'post-modernism' and its assertion that the older 'grand narratives' based on progress and emancipation (of which the Marxist account was one) were no longer valid. The cultural turn in the social sciences has led to a proliferation of new substantive themes in geography. For instance, the rise of animal geographies, children's geographies and the geographies of youth cultures, virtual geographies, geographies of health and illness, geographies of the body and sexualities. All of these resonate with the older approaches associated with the holy trinity of economy, settlement and demography within geography.

The so-called 'cultural turn' has not been without its critics. One of the main criticisms has been that the political edge of human geography has been replaced by a concern for 'difference'. Whereas the early work of radical human geographers was full of optimism about the possibilities of radical change, geographers are as likely to downplay this optimism now. Some argue that the 'cultural turn' involves the 'trivialisation' of the subject such that the bigger questions are no longer addressed. As Hamnett argues

While the new cultural geography has produced some very worthwhile research and scholarship which sheds light on the social construction of the world, a substantial amount of work appears to me to be simply linguistic game playing of minimal relevance to wider economic, social, environmental and political concerns. To this extent, the postmodern turn simply provides a theoretical playpit for academics to amuse themselves harmlessly while politicians and big business get on with their affairs unencumbered by too many awkward or political questions" (2001, p. 167)

In my view, there is a danger that the radical edge of studies in human geography can be blunted if they do not pay attention to the social context in which we work. However, the best work in geography tends to be concerned with important questions

about who gets what, where, and why (and importantly, the why is informed by theory). In summary, contemporary human geography is characterised by its willingness and ability to add a spatial dimension to a wide range of contemporary social and cultural debates, or what Stevenson calls “citizenship-type questions”

Citizenship-type questions include the well-being of our own and different species, future generations, and people and organisms that live in the far corners of our planet. Yet the alluring pleasures of contemporary lifestyles, modern cities, visual cultures and present levels of consumption often mean that such questions are difficult to face. Indeed, how pleasure (rather than duty) might be put back into citizenship is an issue for the future (Stevenson, 2003, pp. 151-152).

Geographers contribute to all these debates. However, as I argue in the next section, school geography has not fully engaged with these developments, with the result that it often fails to offer complex and realistic accounts of the world.

DEVELOPMENTS IN SCHOOL GEOGRAPHY

As I argued in the previous section, the changes taking place in geography in the past thirty years have been the result of a major realignment of the subject with the social sciences. These developments mean that geography plays an important part in debates about social theory. Space and place have become central to these debates, and citizenship is one aspect of this. However, these developments have had little resonance with geography teachers in schools, with the result that it is tempting to speculate that university geographers are from Venus, school geographers are from Mars. In order to understand why this is the case, we need to understand something of recent developments in school geography.

The sustained period of economic growth in the post-war period firmly located the role of education in the political economy of nation-states. Education was woven into the fabric of economic life and seen as vital to the development and maintenance of advanced industrial societies. Geography education played its part in this process, since it offered quite stable representations of economic and social life. This is reflected in the types of textbooks that were produced to support teaching in this period. These focused on describing the distributions of industry, settlement and population. Where explanations were offered these tended to be based on the ‘factors of location’. The geographical paradigm that informed this approach was the ‘man-land’ tradition that relied on the idea of environmental determinism. Later, in response to the perceived forces of modernisation, geography teachers drew upon the so-called ‘new geography’ that introduced into the subject the search for generalisations or ‘laws’ of spatial interaction, normative models of spatial location, and the ‘scientific method’. These approaches became very influential and shaped the thinking of various British curriculum projects in the 1970s and early 1980s. These projects sought to respond to the changes taking place in society and education at the time including the raising of the school leaving age which meant that working-class children were staying at school for longer.

However, these approaches were increasingly criticised throughout the 1980s by a minority of geography educators who sought to expose the ideological nature of school geography. Their arguments were linked to the 'new sociology of education' that stressed the way in which school knowledge reflects the interests of particular groups in society. As the post-war consensus broke down in the mid-1970s, there was, for a while, a struggle over whose geographical knowledge was to be taught in schools. An example of this was the argument about racism in geography in the early 1980s. This centred on Dawn Gill, a geography teacher at Quentin Kynaston School in London in the 1980s. Gill was commissioned by the Schools Council to produce a report on assessment in geography. Gill's report focused on the 'racist' content of the most popular syllabus taught in Inner London Schools. A second example of this type of ideology critique was Gilbert's (1984) book *The Impotent Image* (which was subtitled *Reflections of Ideology in the School Curriculum*), a study of syllabuses and textbooks in geography, economics, history, and social studies. Gilbert examined the mismatch between the claims of the social subjects to enlighten students and the reality, which was to provide them with images of social action that saw people as passive respondents to larger forces. He argued that this was a particular problem in geography, where textbooks offered a determinist view of progress and a de-politicised understanding of the forces that shape people and environment. Henley (1989) took up Gilbert's argument and showed how the language adopted in school geography tended to offer ideological representations of the world. Finally, we should mention the work of Huckle, whose edited collection *Geographical Education Reflection and Action* (1983) gathered together a range of humanistic and radical perspectives on school geography. In a later essay Huckle (1985) argued that geography teachers fulfil both a general and a more specific role in social reproduction. They sustain a 'hidden curriculum' consisting of particular forms of social and technical relations. Social relations vary between the coercive authority of the factory floor and the moral rationality of technocracy. Technical relations range from standardised routines designed to instil dependency to more independent learning and problem-solving designed to develop a degree of self-management. The specific role geography teachers fulfil is related to the overt curriculum and theoretical ideology

The majority of lessons cultivate a voluntary submission to existing social, spatial and environmental relations. The subject is generally presented as a body of unproblematic facts; many of them dull, boring, or redundant. Pupils are given a dehumanized and depoliticized view of the world and their success or failure depends largely on their ability to reproduce ideas, skills and attitudes which sustain the status quo. There is little reference to economic and social processes which could explain the phenomena being studied, and what is generally offered as explanation is mere description. Ideas and material critical of capital are largely excluded, 'theories' are not placed in an historical and social context, and pupils are encouraged to see institutions, processes and knowledge as pre-given, neutral and static. Problem-solving and decision-making are usually cast within a consensus view of society, conflict is regarded as dysfunctional, and little attention is given to radical social alternatives (Huckle, 1985, p. 293).

This critical tradition in school geography was always a minor part of the broader subject culture. However, it found itself in retreat in the 1990s as the state sought

to reassert its hold over education and turn it in the interests of capital. The most dramatic change was the establishment of a National Curriculum which installed a 'regressive' version of the subject and removed many of the interesting cross-curricular developments that had informed curriculum development in the 1980s (Ball, 1994). There have been significant changes in geography education in the past two decades. Perhaps the most significant of these was the establishment, after 1990, of a National Curriculum for geography in both England and Wales. The debates about the content of the curriculum seem a long way off now, but it is important to remember that they effectively installed a content-heavy, 'traditional' curriculum that reflected a particular view of geographical knowledge. Specifically it favoured a 'scientific' (positivist) approach and marginalised more humanistic or radical views (despite their dominance in the wider subject discipline). Just as importantly, a whole new set of institutions has served to regulate the discourses of teaching and learning geography. Thus, in England, the Teacher Training Agency (TTA), the Qualifications and Curriculum Authority (QCA) and the Office for Standards in Education (OfSTED) all proffer their view of pedagogic practice as do the various National Strategies. This has led to the invention of a whole new (and slightly bizarre) language of geography teaching such that we might hear a teacher proclaim a Key Stage 3 pupil to be working at Level 5 in geography with a view to reaching Level 6 if she is able to "show their knowledge, skills and understanding in studies of a wide range of places and environments at various scales, from local to global, and in different parts of the world". The 'level descriptions' that describe what a pupil should be able to accomplish in geography have a powerful effect on teacher-pupil talk in geography. It is not uncommon to find lists of the geographical terms found in the curriculum and commands on the walls of geography classrooms and a great deal of time is spent on developing assessment for learning (a largely technicist discourse that supports a thriving cottage industry of researchers) and 'thinking skills'. These practices are all justified because they have the potential to improve geographical learning. However, the effect of these developments is to turn attention away from the question 'what type of geography education for what type of society?'²

FUTURE GEOGRAPHIES OF CITIZENSHIP

In this chapter I have argued that geography education has provided students with answers to a question that is at the heart of citizenship debates 'to which space do I belong?' As I hope this chapter has conveyed, geography is at the centre of important debates surrounding cultural citizenship. Holloway and Hubbard (2001, p. 230) note how "many geographers are now engaging with the complexity of the world rather than forcing it to fit into established geographical models/theories". In other words, they are involved in activities that might be called 'discerning' – recognising that the concepts and categories studied by geographers can be taken apart in order to stress their complexity. However, I have suggested that school geography has, in recent years, turned its back on the types of arguments and debates within the subject that

might allow teachers to develop critical and discerning forms of citizenship education. In this brief concluding section I want to suggest some of the future geographies of citizenship. These are necessarily provisional, and I certainly do not want to offer a blueprint for geography education.

First, it is clear that we need to find more complex and nuanced stories to tell about what might be called the 'global' scale. One simple story is that of globalisation which suggests that revolutions in transport and communication are creating an increasingly interdependent world. Whilst this story appeals to commonsense and is easy to tell, it risks simplification; as geography educators, we need to think carefully about how and why the discourse of 'globalisation' developed and whose interests it serves. There are a range of counter-narratives that could be used to complicate this simple story. This may entail a deconstruction of 'globalisation' as, for example, in Williams' (2005) brilliant debunking of the myth that we live in a commodified world. Williams presents a range of evidence which shows how economies – which are made by people in their daily lives – are diverse, and, contrary to common belief, are not dominated by the formal wage-relation. Another aspect of this story is what might be called the 'myth of development'. There is a wide-ranging literature that explores the discourses of development and post-development, and these provide the opportunity for re-thinking the accounts that we offer of different places and environments.

The contemporary geographical concern with difference both in terms of places and people suggests the potential for geography education to offer accounts that recognise the diversity of human geography. For example, from my local perspective, I would argue that geographies of Britain need be rewritten to reflect the debates about nationhood and post-nationhood. After the ravages of the 1980s and the recognition by geographers of the ways in which Britain's social geography is divided along lines of class, race and gender, geography educators need to pay attention to the question of whose geography is represented in texts and classrooms.

Finally, and though it has not been a major focus of this chapter, I would suggest that a more 'discerning' geography education for citizenship would avoid simplistic assumptions about environmental change and the impact of human activity on nature. There is a very simple story that too often gets relayed in geography lessons, one that suggests that there is a pristine or pure nature that is damaged or impacted in negative ways by human activity. School geography needs to take on board arguments about the social construction of nature and engage with debates about how our geographical knowledge of environments is never innocent of 'politics' (Castree, 2005).

This is an all too brief excursion into what the geographies of future citizenship might look like. However, I hope that readers will understand the broader point that I am making in this chapter about the need to consider carefully the stories that we tell students about their relation to people and environments – about the spaces to which they belong.

ENDNOTES

1. A more recent example from a British context is Linda Thompson's (2000) contribution to a volume on the 'new agenda' for Geography teaching. She sees citizenship as something that can be 'delivered' through geography lessons.
2. Indeed, it is interesting to reflect on the effect that this discourse of 'learning' has the effect of diverting attention from the wider question of 'education'. As Biesta (2004) argues, learning is by its nature an individual affair, whilst education always involves consideration of the question of what is good and valid.

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ROD GERBER

PROMOTING LIFELONG LEARNING THROUGH GEOGRAPHICAL EDUCATION

INTRODUCTION DEVELOPING A LEARNING COMMUNITY IN GEOGRAPHICAL EDUCATION FOR LIFELONG LEARNING

The quest for relevance has been something that geographers in general and geographical educators in particular, have sought for the past fifty years or so. Once geography became valued for its humanistic and civic qualities, in addition to its physical and technical orientations, there has been a serious identity crisis for this field of knowledge and its role in the formal and informal educational processes. Geography, by its holistic and integrative nature, becomes entangled with environmental studies, environmental education, social studies, and other forms of adjectival education. The main outcome of such discussions is that geographers take their eye “off the ball”. They are more consumed by debating the relevance of the field of knowledge than affirming its qualities as they relate to our world and living in it. In fact, there is no time like the present to affirm the merits of geography and geographical education for understanding human occupancy of our planet and for contributing to its future sustainability. If only the well-worn adage—“Once a geographer always a geographer”—were believed and practised by the wider society, we would be a more understanding world, a more caring society that is empathetic to both environments and cultures, and a more participatory population in securing the future of our planet. The challenge is to develop in people the abilities, skills and values necessary to act as a geographer in their lives.

How can those of us who see ourselves as geographers and geographical educators engender these elements on a global basis to affirm the essentiality of geography in everyone’s lives? The thesis proposed here is that this goal may be achieved through promoting and enacting geographical education as a core element in the lifelong learning of all people.

Since we congregate in groups to form communities, nations and societies, humans are gregarious by nature. We generally interact with each other in different physical environments and now through virtual environments over the Internet. We learn from each other through formal education systems, informal community-based activities and through personal investigations. In whatever forms the learning occurs, it contributes to everyone’s effectiveness as a member of the human race on planet Earth. Hence, it is most efficient to think of these different forms of learning as occurring in *Learning Communities*. Derived from Lave and Wenger’s concept of a

Community of Practice (Lave & Wenger, 1991; Wenger, 1998), we have come to think of individuals operating in self-defined groups through collaboration, co-operation and partnerships to engage in learning for purposes relevant to themselves. As a result of their meta-analysis, Kilpatrick, Barrett and Jones (2003, p. 13) proposed the following encompassing definition of *Learning Communities* which forms a crucial basis for geographers and geographical educators to consider lifelong learning

Learning communities are made up of people who share a common purpose. They collaborate to draw on individual strengths, respect a variety of perspectives, and actively promote learning opportunities. The outcomes are the creation of a vibrant, synergistic environment, enhanced potential for all members, and the possibility that new knowledge will be created.

Few, if any, people operate today as isolated individuals because of the breadth of knowledge in any field. They tend to draw on the knowledge held by a group of individuals to interact socially and to address issues and problems relevant to themselves in their group. Such interaction does minimise risks being taken by individuals when addressing an issue that affects a group of people.

Examples abound of groups of people of all ages engaging in the practice of a community of learning related to issues or problems that have a strong geographical perspective to them. Think of a group of young children in the local Scouts group who have completed their fund-raising drive by selling chocolates and they have to distribute the purchased chocolates to those households in their community. They have to work out how to distribute efficiently all of these packets of chocolates in a reasonable length of time. These children engage in a collective geographical exercise in an informal way. Now, think of a group of secondary school students who are completing a geographical enquiry to decide on the preferred location for the next shopping centre in their suburb. They are applying the geographical concepts of economic threshold areas, distribution and spatial interaction, in conjunction with community values and local regulations, to make informed decisions about the location of this shopping centre. Alternatively, think of a group of citizens in an urban area whose area has grown rapidly in terms of population, but whose public transport services have not kept pace with the increase in population. This group meet as a local action group to put pressure on the local government authorities to change the number and distribution of public bus services. They use their own knowledge and that from sympathetic experts to help them lobby their local bureaucrats to meet their pressing need for better bus services in their area. Finally, think of the group of aged citizens who want to understand some of the world's major issues better, for example, globalisation, terrorism, global warming and the spread of diseases. These are issues which concern them greatly and they want to develop sensible understanding of these issues. Their challenge is to establish a network by which to meet and to obtain advice on the scope of these issues, how they are affected by them, and what they might do in their community to use their knowledge to help others.

These examples demonstrate that across the life-span people use their formal and informal geographical knowledge, skills and values to address relevant (to them) life issues. Inferred in the examples is the idea that such geographical understandings,

skills and values may be developed at different times in our lives, and that they change as our world changes. Our challenge as geographers and geographical educators is to recognise that this is a lifelong process and seek to maximise the opportunities presented in these learning communities.

REFLECTIONS ON A FRAMEWORK FOR LIFELONG LEARNING THROUGH GEOGRAPHY

In an initial attempt to develop a framework for Lifelong Learning and Geographical Education, Williams and Gerber (2002, pp. 238–243) presented a four-dimensional model that focused on

1. The motivation for lifelong learning (education for leisure; remediating one's knowledge base; education for citizenship and community development; and vocational education).
2. The different stages of adulthood in which the learning occurs.
3. How the learning occurs (formal learning through teacher-centred, student-centred groups or individual student-centred methods; one-off non-formal learning; informal experiential learning; or incidental learning in one's life) (Foley 1995, *xiv*).
4. The content of the learning (geographical knowledge, skills and attitudes).

This model presents a useful organising frame in which to think about lifelong learning through geographical education. Fundamental to it is the appreciation that as adults become more experienced in their learning across their life-broad roles they become more selective in the specific learning activities in which they engage. For example, at school, students learn basic geographical understandings and skills and methods to apply them in purposeful tasks, such as understanding how to find their way from A to B. Into adulthood, formal and informal learning activities are intended to extend and improve people's understanding of their life-worlds and their functioning within them. Travel may be on their agendas and so they learn how to maximise the resources of the Internet to plan their next holiday. A career change may be on the horizon and so they wish to learn about Geographical Information Systems and how to apply them as a possible additional employment skill. Therefore, the model allows for selection of items in each of the four dimensions to encapsulate the learning that is being undertaken, why it is being done, how it happening, and when in the life-span this happens.

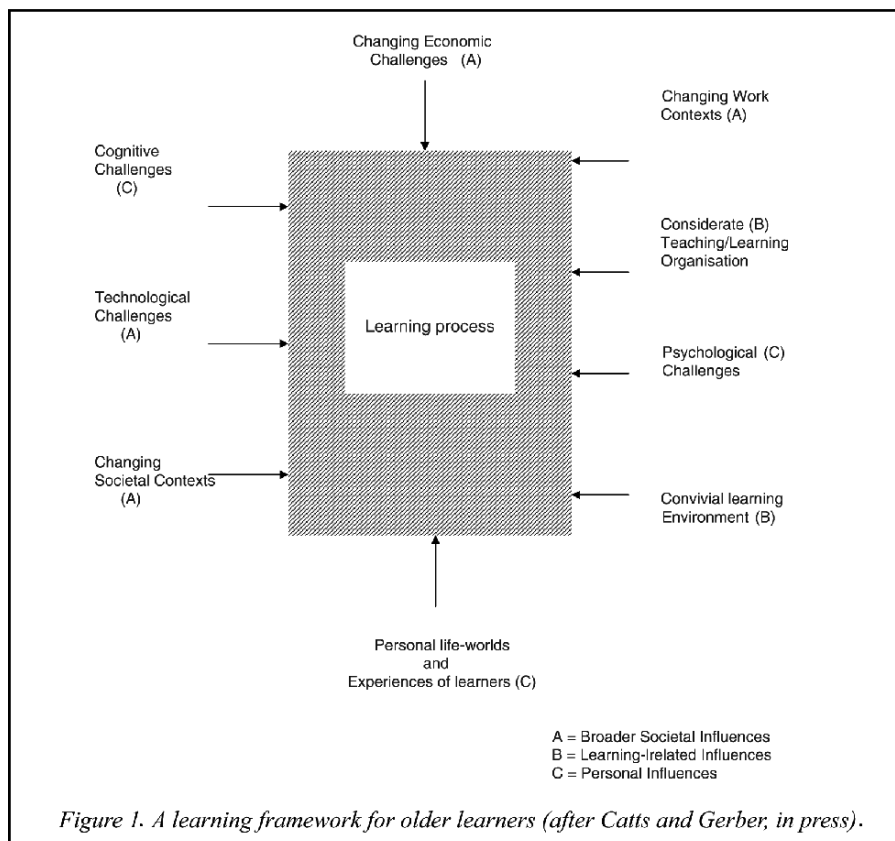
An extension of this framework is to broaden the context in which it occurs and to think more closely about the process that occurs when older learners engage fully in different forms of learning. Catts and Gerber (in press) have proposed a broad learning framework for older learners that is grounded on three sets of contextual variables (See Figure 1)

1. Broader societal influences including changing societal contexts, technological challenges, changing economic challenges and changing work contexts.

2. Learning-related influences including considerate teaching/learning organisations and convivial learning environments.
3. Personal influences including cognitive challenges, psychological challenges, personal life-worlds and experiences of the learners.

It is argued that younger learners do not have the contextualised experience to allow all of the variables to impact on their learning. They are being inducted into the learning process and are developing the geographical knowledge, skills and attitudes necessary to function in their emerging worlds. Older learners, on the other hand, take cognisance of most of these variables to varying degrees to guide their learning and allow them to influence their process of formal and informal geographical learning.

Much has been written in numerous geographical education reference books about the learning process in formal geographical education, and in international journals such as the *Journal of Geography in Higher Education*, *Journal of Geography*, *Geographical Education* and *International Research in Geographical and Environmental Education*. National educational standards in geographical education, for example, *Geography for Life* by the network of U.S. Geographic societies (National



Geographic Research and Exploration, 1994), encourage the conscious development and refinement of geographical understandings, skills and perspectives for an effective adult life. However, little has been written about the older adult learning process as it pertains to geography.

The adult learning process in general has been written about widely by authors such as Knowles (1978, 1980 and 1984) and for older adult learners by Jarvis (2001). Catts and Gerber (in press) have suggested a refinement to this learning process by considering it to consist of four phases through which older adult learners working collegially with co-learners and advisors are able to develop quite detailed understandings of issues that are important to themselves and their life-roles. In the *Getting Started* phase, the older learners engage in some form of social experience to address an identified educational challenge. In the *Development* phase, they become properly organised to learn and engage in a series of preliminary activities to ensure that their chances for success in learning are high. During the *Application* phase, the learners put their learning approach to the test through some form of practical application. Then, in the *Reflection* phase they consider how effective the learning has been for their needs. These phases are detailed in Figure 2 below and reflect the reality that such learning is an iterative process that is motivated by an identified need. The need is often one held by a group of older adults and the process by which it is satisfied is a continuous one involving deliberate interactions amongst the learning group, with or without the assistance of external “experts”. As the result of this iterative process the older learners will adjust their life behaviours. They will use geography to understand such basic activities as finding their way from their home to the medical centre for treatment; the changing weather patterns in different seasons; working out their holiday travel plans; or knowing from an atlas where the latest earthquake has occurred around the world.

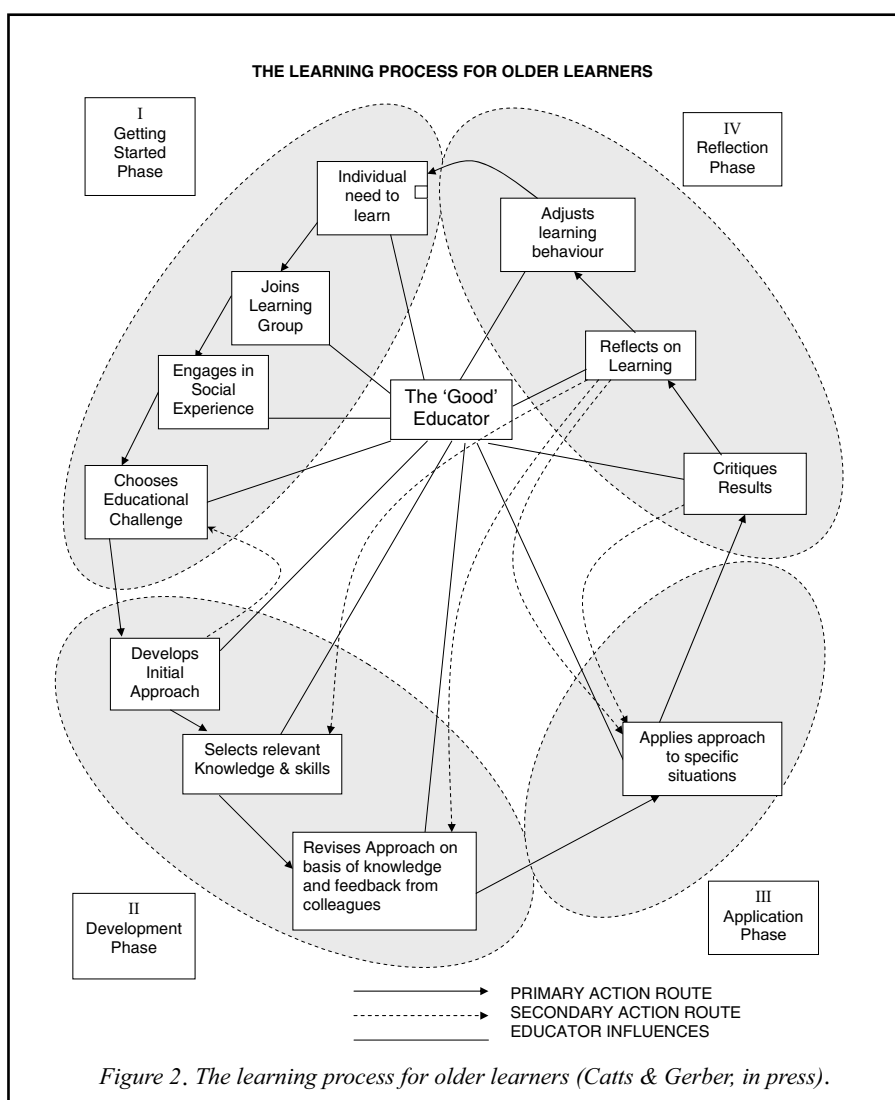
While the call for the development of a framework for learning across the lifespan through geography is being answered through models such as those above, the emerging need is to consider carefully the changes in people’s learning processes as they age. As people age they learn differently from younger people and hence, what is needed is the development of the collegial older adult learning process as it is applied to geography.

PEDAGOGY TO PROMOTE LIFELONG LEARNING THROUGH GEOGRAPHICAL EDUCATION

Instrumental in facilitating the learning process illustrated in Figure 2 is a concern for the pedagogy that will promote lifelong learning through geographical education. It is useful to remember that as people age they exhibit a preference to learn as a learning group that includes a considerable amount of social interaction. Therefore, Pattison (2001, p. 173) suggests that such learning activities be developed around the following communication and learning styles visual (learning through seeing); auditory (learning through hearing); and kinaesthetic (learning through physical activity in a hands-on manner). In order to change as people through learning, lifelong

learners engage in one of the following approaches collective learning, collaborative learning, action learning, just-in time learning, or guided learning.

Collective Learning occurs when “Experts join groups of learners working collectively with real people on concrete solutions” (Finger, 1995, p. 116). Older learners who want to understand how different forms of environmental hazards in their urban area affect their life-styles join with scientific, health, demographic and other geographic experts to learn how to interpret data on environmental hazards; what to do to minimise these hazards and even how to be an environmental action



group with the local Councils to address these hazards in their life-worlds. Working with these experts, they learn how to understand the prevailing wind patterns, road traffic exhaust emission data and noise statistics so that they can draw the attention of the authorities to relevant environmental “hot spots”. The experts can also assist in the identification of relevant sources to approach to deal with these issues. Some advice may also be given to the older learners on exactly how to “sell” their concerns to the authorities in order to have maximum impact. This group of like-minded older learners will continue to work as a collective unit after they have completed the specific tasks that they identified so that they can reflect on the strategies that they used and decide just how effective they were.

Collaborative Learning, according to Floren (2003, p. 204), focuses on learning as “an integrated and natural element of human activity” in which people participate in their social world. Bearing some similarities to *Collective Learning*, this form of learning concentrates on the people acting as a community of practice (Wenger, 1998) in which older learners develop cognitive understandings through working with colleagues in specific learning experiences. Relevant experts may be involved, but the focus is on the group of older learners sharing their understandings, collecting more information from visits and searching the local library, together with searches of the Internet. For example, the recent spate of natural disasters around the world may be the basis for a group of older learners to engage in their own self-generated focus group to appreciate the impact of such events and to decide if they can offer any form of assistance. Such collaboration in learning can be applied at any time across the life-span—school students can conduct similar studies as they engage in an appeal for assistance for people in an area who have been affected badly by an earthquake, for example, in Pakistan or Iran.

Action Learning takes the interaction mentioned in the previous two forms of learning and focuses on the action phase of the experience. As Smith and O’Neil (2003, p. 63) state, this is “a form of learning through experience, “by doing”, where the task environment is the classroom, and the task the vehicle”. The principal components of this form of learning consist of participants engaging in real problems in real time scenarios; learners operating in small, organised groups which meet during a fixed programme cycle; problems which address the learners’ challenges; a collaborative, supportive learning process that is based on reflection, questioning, conjecture and refutation; and actions are taken between meetings to resolve problems (Smith & O’Neil, 2003, pp. 63–64). Field-based action learning is a powerful strategy to be addressed in simulated form in secondary school geography projects. However, it can be equally powerful amongst older learners when they identify a local street that has become a hazard because of heavy vehicular movement which is very noisy, threatens the safety of children moving around in the vicinity, and degrades the value of real estate in the area. A group of local older residents may meet in someone’s house to discuss the problem and to decide what they can do to reduce its impact. This may involve meeting local councillors, contacting journalists, seeking scientific data, holding a local meeting on the issue and then taking decisive action to have the problem resolved. Groups of older learners, acting as applied geographers, can have

considerable impact when it comes to having local problems, such as the the noise issue, resolved.

Just-in-time Learning has derives from the business sector. It consists of the “negotiated provision of learner-generated immediate skill formation” (Beckett et al., 2002, p. 332). In essence, it involves the conjunction of the application of situational leadership in management studies, the concept of reflective action, and situated learning in practice. In practice, it involves people learning something so that they can use it in their current life-roles. There is a direct need for this learning. Amongst older learners, it may involve attending a language and culture class so that they can be more effective as a tourist in a particular region. If they understand local customs, a little of the local language and ways of living in the region then they may appreciate their touristic experiences more fully.

Guided Learning differs from those above by considering how educators and older learners interact during learning experiences. According to Billett (2001, p. 141), three levels of guidance may be identified

1. Organising and managing learning experiences.
2. Close guidance in the development of procedures and understandings.
3. Developing self-regulated learning and transfer of learning to new tasks.

Older learners focus mainly on the second and third levels of guidance. At the second level, they are concerned with the demonstration of how to perform specific tasks, such as how to read a topographic map; modelling of tasks, for example, planning a route on a topographic map; using strategies to make opaque information transparent, for example, working out how to visualise landscapes from topographic maps; and monitoring their progress, for example, actually finding their way around an area using a topographic map. At the third level, older learners, with or without educators or tutors, reflect on what they have learned and how it may be transferred to other situations, for example, they can reflect on how successful they were using a topographic map of a local area, and how difficult it might be if they tried to perform a similar task using a topographic map of an unfamiliar place.

People who wish to practise lifelong learning need to develop competence using a set of basic tools which they will use frequently and widely in their life roles. As Catts and Gerber (in press) indicate, these tools include

1. Techno-literacies which enable the integration of text and information mainly through the World Wide Web and computing. Lankshear and Knobel (1997, p. 142) suggest that these literacies involve text-based computing software; information-based software such as databases; program-based software and games-based software. In addition, much use is made of Internet technologies for searching for information, maintaining communication networks and for sharing viewpoints via chat groups. Older learners are finding that they can communicate with colleagues around the world to share and discuss specific geographical and environmental issues such as global warming and changing weather conditions.
2. Emotional intelligence which involves five basic social and emotional competencies self-awareness, self-regulation, motivation, empathy and social skills (Goleman,

1998, p. 318). It is primarily used to recognise one's own feelings and those of others; to motivate oneself; and to manage feelings when operating individually or in groups. This tool is very important for older learners as they express their experienced-based views about such global issues as cultural diversity, globalisation and biodiversity. Often, based on personal experience, older learners become rather emotionally involved in issues allowing their hearts to rule their heads in their advocacy.

3. An effective learning environment is essential for all learning for older learners because they need to feel comfortable in the learning environment. If not, then distractions will impede learning. It is most effective to take older learners on a field visit that does not involve too much inhospitable terrain for they will be distracted by the physical challenges rather than the attractive views. Easy access to amenities should also be considered together with the requirement not to carry too much equipment. Similarly, placing these learners with complex equipment that they have trouble understanding how to use provides more challenge to distract them from learning.
4. An effective learning culture, where collegiality and trust abounds and communication channels are open, is important to promote collective outcomes. While each person may be developing individual competencies, for example, learning how to perform Google searches on cultural customs by particular tribal groups in West Africa, the participants are developing relationships amongst the whole group concerning the customs and practices of tribal groups in West Africa.
5. The capacity for knowledge management is relevant especially for adult learners of all ages. This involves the capacities to act tactically and strategically so that knowledge gained is shared equitably and transparently across the whole learning group. Using the above example of the tribal groups of West Africa, the challenge for the older learning group is how all members can organise knowledge about these customs and practices into logical categories to facilitate understanding. A strategy based on retrieval charts placed on electronic databases may be the way to go. Here, each member of the group, or small team, enters the results of their investigation in an organised form and eventually all members will be able to download a copy of the results for their benefit and later discussion.
6. A team orientation is natural for older learners as they wrestle with different environmental problems. It is the basis for developing the "sense of oneness" (Jackson, 1995) in which the team has control over its learning and negotiates internally or with external experts how the learning will take place. Whatever pedagogy is used, the ultimate outcome for this group of learners will be an empowered group of learners rather than a set of individuals with varying degrees of knowledge. They will generally support each other sufficiently until all members understand how to perform a task or acquire some concepts. For example, developing an understanding of the role of religion across major cultural groups is no easy task. However, through a collective and collegial approach, older

learners can gain sound understandings that are not found in the wider society. Their curiosity assists in delineating this complex challenge.

Teaching and Learning strategies that may be used to promote effective learning through geographical and environmental studies for lifelong learners are variable, and they depend on the specific purpose that has been identified by the learners themselves. Based on the wide range of adult learning literature, Catts and Gerber (in press) have identified the more prevalent strategies as

1. Problem solving that is less structured than Problem-Based Learning (PBL) or Enquiry Learning.
2. Project-based learning in which specific projects are identified by the learning group, are developed, implemented and reviewed, before strategies for action are identified from these results.
3. Learning contracts are agreed between adult learners and consultants or facilitators to engage in and to complete a specific learning activity.
4. Role-playing to simulate real life experiences in which older learners act out different roles surrounding an environmental issue to appreciate its complexity.
5. Mentoring is a key strategy for older learners. Sometimes, they are being mentored and on other occasions they are acting as the mentor of a colleague in their learning group. It is the collegial way to ensure that all members of the group keep up with their peers in the learning process.
6. Guided participation is the strategy that older learners use to bridge their current understanding and skill level to reach new levels through restructuring their participation in different learning activities and changing their responsibilities in these learning activities.

The choice of which strategies to use will be up to the older learning group and any consultants working with the group. Geography and geographical education simply becomes the medium for implementing any of the above strategies.

TAKING OWNERSHIP OF ONE'S LIFELONG LEARNING THROUGH GEOGRAPHY

Whereas learning in the youthful years is in part controlled by the formal settings in which school, vocational and higher education occurs, in the lengthening adult years it is controlled more by the individual according to specific needs. Therefore, taking ownership for one's lifelong learning is a key factor in the success of lifelong learning. How can adults through geography and geographical education do so? One piece of guidance can be found in the recent Australian study of groups of older learners (Gelade, Catts & Gerber, 2002) which identified criteria for good practice in learning. These criteria may be translated into the geographical world. They are as follows

1. *Learning using relevant prior geographical knowledge*

Older learners know that they already know certain information and that they have had many life experiences that have involved geographical perspectives. If possible, they would want to build on these earlier experiences rather than then different ones all over again. Skills developed through fieldwork and geographical inquiries may be used as the basis for developing advanced technological competencies, such as using Geographical Information Systems. Basic geographical concepts will still form important building blocks for developing understandings of different places and at different scales. If possible, some form of transfer of learned geographical information will be necessary.

2. *Basing the geographical learning performance on outcomes that are acceptable to the older learners*

Remembering that older learners will use geography or geographical education for their specific purposes, the importance of outcomes to resolve specific challenges far outweigh those for formal or informal evaluation purposes. The real purpose of using geography was to meet a specific personal challenge, such as understanding where terrorism is prevalent throughout the world, rather than to address a generic issue, for example, to demonstrate competence in understanding the concept of global terrorism.

3. *Negotiating the geographical learning process*

Older learners prefer to negotiate what they learn and how they learn it. They do so to ensure that the direction of the learning meets their learning objectives and that the learning strategies are matching their interests and capabilities. Since all participants in the learning process are mature individuals, they naturally want to negotiate all aspects of the learning process. They do not simply want to attend a class and be taught by a teacher who may not have their interests at heart. Learning is very personal and so the negotiation process is paramount for it to succeed.

4. *Establishing and maintaining a safe, non-threatening geographical learning environment*

Older learners need to feel very comfortable in the learning environment in which they function. If not, they are likely to withdraw from the activity. For example, it is unwise to conduct alpine studies with older learners in the higher altitudes because these could become physically demanding and distract older individuals from the learning task. This might be a case where virtual alpine studies can be completed using various types of multi-media presentations and simulations. The learning environments have to be accessible for all learners. Similarly, they have to be safe from threatening elements. It would be unwise to continue a field-based investigation if the weather suddenly turned poor. Safety also refers to safety from exposure to other kinds of risk, for example, information security risks. Older learners must feel comfortable in their learning or they tune out.

5. *Using effective, acceptable tutors who possess the relevant geographical expertise required and are a similar age to the adult learners*

Older learners desire to interact with people who understand how they learn and who promote such approaches with them in the learning process. That is why many older learners prefer to learn from colleagues who have mastered the technique or skill and can share it in a form understandable by them. They are likely to be people who offer clear succinct advice and guide the older colleagues through the learning process using small rather than large steps that involve plenty of hands-on practice.

6. *Remember the explicit motivation of the older person to learn*

Older learners engage in further learning because they have a specific goal in mind, for example to travel from Australia to Mongolia. It is crucial to know this purpose and then to facilitate its attainment if one is acting as an educator or consultant in this process. What is valuable is to have older learners share the exact nature of their purpose for going to Mongolia in an informal environment prior to actual learning activities occurring.

7. *Remember the different pedagogies that are favoured by older learners*

Allow the strong desires by individual older learners to dictate the ways in which they learn. Trying to ram information or techniques down their throats will be unproductive. Being open to negotiated approaches to dealing with the geographic topic is important. If the group of older learners wants to solve a parking problem in their community by conducting a traffic survey then help them to organise and complete it. Allow them to work amongst themselves to discuss ways to approach the issue and promote coaching sessions when they are needed. It is inadvisable to apply pressure to complete tasks within a specific time frame. Pacing will be an issue since older learners are not driven to complete tasks in a specific time frame. They would rather complete the task and understand it well no matter how long it takes.

These criteria offer constructive advice to enhance geographical learning amongst older learners. The topics of their learning are going to be as broad as they can be because of the diverse needs of these learners for information and understanding. Being able to discern the precise needs will be important in satisfying these criteria as they are applied to geography.

THE CASE OF GEO-POLITICAL EDUCATION

Geographers have played significant roles in the development of understanding of a range of internationally significant geo-political studies. They have assisted us to develop a stronger understanding of the nature of these issues and to appreciate their international impacts. The case of the growth of Islam in the twenty-first century in

regions around the world is an important issue that has strong geographical overtones and can well be an example of the need for lifelong learning to occur.

First, the predominance of countries where Islam dominates may be located in the Middle East, North Africa and South-east Asia. This map of distribution is not widely understood or promoted in formal education in geography classes. It is probably time for this to occur. Then, there are the countries in which the growth of Islam is occurring at a rapid rate. Western countries such as France are witnessing a considerable increase in the number of citizens who practise the Islamic religion. Projections for the coming decades indicate an acceleration in the number of people practising the Islamic religion in Western countries.

From a geographic perspective, this development is worthy of investigation since many people in Western countries really do not understand the nature of the Islamic religion. Thanks largely to the mass media and the lack of direct educational intervention by governmental policy, most of the people in Western countries have been led to believe that there is a strong connection between international terrorism and the Islamic religion. This inaccuracy has led to the generation of many ill feelings between Westerners and Muslims. Sadly, there is little understanding of the pillars of the Islamic religion and how it is practised in different regions of the world. Westerners of all ages persist in a world of ignorance. This is a major challenge for the future of humanity since the destructive power of international terrorism appears to be gaining strength rather than dissipating in regions around the world.

Geography can contribute to this learning process in a number of ways. First, it can be used by the mass media and educational systems to demonstrate where Muslim populations are located around the world. Once even a brief understanding of the basis pillars of Islam are understood people will realise that terrorism has nothing to do with the religion. Terrorism has much to do with the achievement of political agendas directed against Western powers. Secondly, geography can map the migratory patterns of most of the Muslims around the world as they seek to escape from persecution in their former homelands to establish new lives in other countries. This will help to demonstrate how the religion moved around the world and when this occurred. Obviously, second and third generations of the religion have grown up in their adopted homelands over time. This has cemented Islam as a major religion in many Western countries. Thirdly, geography can project changes in the numbers of Muslims in these countries over the coming decades. These changes are likely to have profound implications where substantial numbers of Muslims will act in democracies to elect some of their people to be political representatives. Fourthly, geography can assist to explain the struggles between the main sub-groups of Muslims—Sunni and Shia—in different countries for control of the religion and the politics. For example, in the unfolding post-war Iraq, the battle for control of the country politically continues between these two main groups of Islam whilst the minority Kurdish group looks on. As well, the changes in the power base in Iran are moving to a much stronger anti-Western perspective. These ramifications on the global community have yet to be played out. Fifthly, the cultural variations that Muslims bring to Western societies can be analysed from a geographical perspective to shed light on the cultural customs

and traditions that are becoming popular. They are much more than Arabic foods and methods for cooking them! Associated with these cultural aspects are important family values based on Islam and concerns for sustainable environments.

Older Western citizens need to engage with the study of different major religions to start to appreciate what basic beliefs drive the majority of the world's populations in their pursuit of prosperity and harmony. Islam is the current flavour of the month, but it could as easily be Hinduism, Buddhism or Taoism.

Understanding some of these issues regarding Islam and the spread of Islamic peoples around the world is crucial to appreciating why certain nations wish to act in an aggressive manner outside of their own territory. Clearly, these are not the only reasons for external aggression, for example, demand for resources and a declaration to rid the globe of "rogue" states have been used over time to justify political interventions in other sovereign states. However, the Islamic issue is a good reason why people should become better educated in geo-political matters.

CONCLUSION AN URGENT CALL

The message intended in this chapter is for people to take lifelong learning seriously and for geographers and geographical educators to play an active part in this process. With an aging population, there is a crucial need to understand how to promote lifelong learning in the wider population so that countries have useful populations of citizens who want to contribute to the prosperity of their nations across their lives. Citizens who wish to remain active and participative are likely to be people who value the cultural complexity of the societies in which they live. The current calls for people to work longer in paid employment is an interesting interpretation on how people can contribute to their nation. Unfortunately, this call is confused with the desire to have people contribute longer to their own well-being so that their governments are not required to contribute more to their social welfare. In many parts of the world, the concept of a welfare state is not part of the agenda. Aged members are cared for by their families. Therefore, the call for people to work longer is not the long-term answer. Rather, the thesis presented here is for people to engage wholeheartedly in lifelong learning so that they contribute "mindfully" (Langer, 1989) to themselves and their society. They remain open to new ideas and ways to do things. Economic issues are important but they are less important than self-driven participation in becoming more able to think for oneself throughout one's life and contribute to solving personal community-based issues without relying on bureaucratic intervention. Our aim should be to develop "geographers for life" in all people—an aim that should be perpetuated from birth to death through all forms of formal and non-formal education and learning.

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