Felix Rauner
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Editors

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Rediscovering Apprenticeship

Research Findings of the International Network on Innovative Apprenticeship (INAP)

UNESCO UNEVOC INTERNATIONAL CENTRE for Technical and Vocational Education and Training

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Edited by

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Series Editors Introduction

This important book is being published at a particularly opportune time: at a time when there are on-going vigorous discussions and debates about the quality of Technical and Vocational Education and Training (TVET). The high world-wide interest that exists concerning the quality of TVET is reflected, for example, in the discussions which occur through the UNESCO-UNEVOC International Centre's e-Forum.

Commentators are concerned by what they believe is the low (and even declining) quality of many TVET programmes, and in their deliberations are exploring what can be done to improve the quality and relevance of TVET programmes. These discussions are occurring at all levels: from the micro-level, where questions concern the quality of teaching and learning, to the meso- (whether institutions provide the appropriate services and produce relevantly skilled graduates), macro-, systems and policies levels.

Concerning educational policies and systems, the quality debate encompasses different levels. This book provides many good examples of discussions on the national level. For example, for many years major efforts have been made to clarify VET quality issues at the European level, this leading to the recent recommendation by the European Parliament and of the Council, to establish ECVET, a European Credit system for Vocational Education and Training.

The discussion on quality relates mainly to key issues such as: the cost-effectiveness of vocational education; the image of VET for different stakeholders; and, especially recently, to the transferability of qualifications and educational outcomes both within countries and across borders. Here, the international transferability of VET is of interest and concern, being one of the key issues that clearly differentiates general higher education from vocational education, and which has an important impact on the development and prestige of TVET. Another important area is the transferability of the recognition and validation of skills and knowledge within different educational sectors of Life Wide Learning, this being an especially relevant question for apprenticeships due to the partly informal (and so highly flexible and individual nature of the) studies which creates big challenges in assessing the quality of both inputs (teaching) as well as the outcomes of study programmes.

Various macro-level good practices are examined in this insightful book which can be linked to quality issues concerning the coordination of apprenticeship systems. Examples include:

- The arrangement of dual VET, so that the focus of the studies undertaken leads more to professionalisation than to certification. Here the innovative French 'sandwich model' can be referred to as an example (as described by Bénédicte Gendron), where workplace apprenticeship is integrated into vocational studies through various sessions rather than as one compulsary phase at the end of the school-based studies.
- A consistent legal framework for dual vocational training, as is described in the case of Switzerland by Rauner et al., which lays the foundations for an integrated governance system by the different stakeholders involved.
- The cooperation of social partners (trade unions, government and employers) within a joint national framework, as is the case in Ireland (as described by Barry Nyhan), which has set important elements such as: the organisation of apprenticeships programmes based on standards rather than on length; achieving a good balance between on-the-job and off-the-job training; and, the need for a bigger contribution by employers into the study programmes, since they may be regarded as being the main beneficiaries.
- The coherence of national systems with larger frameworks, such as in the case of EU Member States, the European policies and practices (as described in the chapter about Italian apprenticeship reform by D'Agostino et al.).
- Support for the development of the providers of learning in apprenticeship programmes, namely trainers, as is examined in the chapter by Philipp Grollmann.

This book also suggests solutions to problems faced by VET that cross borders: for example, in France, VET programmes have been reorganised and renamed as being a 'Vocational Baccaluréat' in order to raise the prestige and status of this education sector for potential learners.

The prevailing, almost all pervasive, low reputation of vocational studies is a problem that is referred to by many authors in the book. Students involvement with vocational education are often presented as being a 'second choice' which students become involved with after failing in their academic studies, rather than being based on a conscious choice which reflects students' interests, preferred learning styles etc. This is unfortunate since vocational education generally provides a larger variety of learning settings and practical learning modules, provides a greater range of learning-by-doing settings (rather than focusing mainly on creating theoretical knowledge), and provides second chance opportunities for students who have not been successful in traditional, academically oriented general education.

Dualism may be viewed as being a quality aspect of vocational education. As discussed by the editors of this book, all occupations ultimately require and involve learning on the job, regardless of whether it is an academic or non-academic area of employment. The wide variety of educational settings available is a valuable aspect of vocational studies, providing students with real-life experiences during

their course of studies. This better prepares learners for the world of work, and also provides a more holistic approach to teaching by taking advantage of the different learning modalities available to learners. It is therefore anticipated that the *dual-ism* of vocational education, a term which suggests that two different things are involved when combining theoretical and practical learning, will be at the core and one of main benefits of vocational studies.

Series Editor Rupert Maclean
June, 2009

Preface

The INAP Network was founded in 2006 in Bremen within the framework of an international conference on best practice in apprenticeships. The network draws together common research interests in the international phenomenon of 're-discovering apprenticeship.' It aims at the further modernisation of vocational education and training through the means of internationally linked research work in these fields.

Both the fact that, ultimately, each profession and occupation has to be performed (and thus learned) on the job as well as the paradox that the transition towards more flexible job markets actually leads to stronger vocational identity among workers lead to a need for a new assessment of the meaning and importance of TVET in modern industrial societies of the 21st century.

INAP offers an international platform of study and research for scholars and research institutions from countries all over the world and represents highly diverse educational systems. In contrast to the situation we faced in the past century, the tradition of "apprenticeship" is now challenged to integrate into the various educational systems in a manner that allows a successful transition from vocational to higher education. Simultaneously, apprenticeship should remain a solid fundament for lifelong education.

Beginning an occupational career is no longer a one-way road without having the opportunity to access further education and academic careers. On the contrary, school leavers often opt for apprenticeship before going to university and vice versa!

Whether the emerging international interest in apprenticeship will also stimulate a convergent development of VET systems towards an international architecture of TVET remains to be examined by INAP in future research and discussions. The merging of international job markets as well as continuing economic internationalisation legitimate a contention of a new balance between the drive towards internationalisation on the one hand and a more culturally determined force of localisation on the other hand.

This book makes an important contribution to the international literature on apprenticeship. It draws together some of the leading researchers in the area, and provides a body of knowledge on current practices and issues that has previously been lacking in this complex interdisciplinary field. The lessons learned from

countries' experiences, as presented, provide a valuable platform for policy-makers and scholars alike.

We would like to thank all contributors to this book and also Springer International for publishing the research findings of the INAP Network.

Felix Rauner
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Michaela Brockmann is a Senior Research Fellow at the University of Westminster, London. She has been working on major comparative studies on vocational education and training in Europe, and has published widely, most recently in the Oxford Review of Education. She is a member of the Core Group of the Nuffield 14–19 Review of Education in England. Her research interests include qualitative research methods and biographical approaches to young people's learning and construction of identity.

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Robert I. Lerman is Professor of Economics at the American University, Senior Fellow at Urban Institute, and Research Fellow at the Institute for the Study of Labor (IZA) in Bonn, Germany. He was one of the first scholars to examine the patterns and economic determinants of unwed fatherhood and to propose a youth apprenticeship strategy in the US. Dr. Lerman has published widely on social policy and employment issues, most recently 'Are skills the problem? Reforming the Education and Training System in the United States' in *A Future of Good Jobs?* (Upjohn Institute, 2008).

Barry Nyhan is a learning and development specialist who has led numerous international research-related projects while at the European Commission and the European Centre for the Development of Vocational Training Cedefop During his time at Cedefop he led research projects dealing with innovation in organizational and social learning and human resource development. While at the European Commission, he coordinated the research strand of the European Leonardo da Vinci action programme. He is a former visiting professor at the College of Europe in Bruges, Belgium. Currently, he is a visiting research fellow at the University of Bremen, Germany. His foundation academic studies were undertaken in Ireland, where he is currently based.

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Felix Rauner is Professor at the University of Bremen and head of the TVET Research Group. His domains of research cover a broad array from vocational qualifications research, development of the German and international systems of vocational education and human resource development. Felix Rauner is editor of the Handbook of TVET Research (Springer) and co-editor of the series 'Bildung und Arbeitswelt' (LIT) and 'Technical and Vocational Education and Training' (Springer). He is chair of the board of UNIP (United TVET Network on Innovation and Professional Development) and Chair of the board of the INAP Network (International Network on Innovative Apprenticeship).

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Chapter 1
Introduction: Rediscovering Apprenticeship

Felix Rauner and Erica Smith

1.1 Conceptual Clarification

At its first conference in Bremen in 2006, the International Network on Innovative Apprenticeship (INAP) summarized the results of the presentations and discussions in the thesis that the tradition of apprenticeship is currently being rediscovered throughout the world. This hypothesis, at that time tentative, was developed with increased confidence in the proceedings of the second conference in February 2008 in Vienna. Researchers from 13 countries participated in the latter conference and delivered almost 30 contributions, all of which confirmed the assumption that the new interest in dual vocational education and training is stimulating more and more national and international research and development projects as well as policy initiatives towards the re-establishment of dual vocational education. For example, a recent reform initiative of the House of Lords in the UK is a further step in a series of attempts to revive the flagging apprenticeship tradition in the UK. The 'Apprenticeship Programme in the Mediterranean Region' coordinated by the European Training Foundation (cf. Chapter 9) is a remarkable sign of the attractiveness that dual vocational education has for VET policy in a growing range of countries.

This international phenomenon can be approached first from a descriptive point of view by means of an overview of national VET systems under the particular aspect of the relevance of apprenticeship training in research and policy. These contributions are supplemented by international comparative analyses such as the international evaluation study on the governance structures in dual vocational education and training in Austria, Denmark, Germany and Switzerland that was supported by the Bertelsmann Stiftung (cf.Chapter 4; Bertelsmann, 2009). The particular importance of comparative analyses lies in the fact that they challenge the misconception that the structures of national VET systems are largely convergent and that the paradigm of 'apprenticeship' is firmly linked to a particular cultural context, that

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which exists predominantly in the German-speaking countries. This widespread but mistaken assumption may act as a barrier to the establishment of the dual organisation of vocational learning in countries where the economic, employment and education systems have different cultural backgrounds.

The chapter by Zelloth and Sweet on the Apprenticeship Programme in the Mediterranean Region (see Chapter 9) gives a particularly clear picture of the possible variety of the forms of dual vocational training. Thus the German version of dual vocational training is by no means the prototype that should be regarded as the standard for a successful implementation. It is only one culturally embedded type of dual vocational training among others. This view is supported by a fundamental learning theoretical argument that was formulated by Harold Garfinkel (1986) with exceptional clarity, namely, that any occupation must ultimately be learned on the job, regardless of whether it is an academic profession like physician or lawyer or a non-academic occupation. For the development of professional competence in the context of institutionalised vocational education this means that the principle of the dualism of theoretical and practical learning (i.e. learning in the work process) is an indispensable and fundamental principle of vocational education and training.

In the practice of vocational education the duality of vocational learning exists in two basic types:

1. *One-phase or integrated duality:* This type is frequently used in apprenticeship training. In the subject-specific instruction at the vocational school the professional work experience is reflected, systematised and transformed into generalizable theoretical knowledge.
2. *Two-phase or alternating duality:* This type of learning is frequently established in higher education. A university study programme (phase 1) is followed, after graduation, by a phase of practical learning on the job (phase 2). In non-academic vocational education there are also several types of alternating training. Usually a phase of school-based work-related education (vocational preparation) is followed by a phase of practical training on the job. Even if this second phase is not formalised it nevertheless takes place as informal acquisition of professional competence in the work process.

This opens an interesting field for comparative VET research. Problems like the development of professional competence and vocational identity in the different types of dual vocational education and training have been as yet little investigated.

When the existing systems of dual vocational education and training are studied in terms of their governance and support structures there appear striking differences between the national traditions of dual training. This is even true of countries that have a common cultural background like Austria, Germany and Switzerland. This conclusion drawn from recent research in the field has a particular relevance for educational policy and planning, for the stability and performance of dual vocational training systems highly depend on the shape and quality of the governance and support systems.

1.1.1 Professional Knowledge as a Type of Experiential Knowledge for Skilled Workers at the Intermediate Qualification Level

The establishment of sociology as a discipline whose mission is to interpret and explain the processes of societal change has led to the formulation of paradigms concerning the post-industrial society, which also entailed recommendations for the organisation of education systems. The call for a 'college for all' policy was largely influenced by sociological concepts that were often dramatically increased in their scope when they were introduced into ordinary language. Daniel Bell, for instance, characterises the transition from the industrial to the post-industrial society (cf. Bell, 1973) by a fundamental change of the knowledge relevant for society. In the future, the economy, politics and social structures would allegedly centre around the new 'axial principle of theoretical knowledge'. Theoretical knowledge would spring from the sphere of science and research at a level of abstraction far above the concrete practical knowledge relevant to the world of work. The universalism of scientific knowledge would constitute its strong point and account for its particular importance. In this perspective, which was widely received in the debates on education and social policy, vocational training tends to disappear and becomes a 'discontinued model', as it were, whose decline began at the time of industrialisation in the 19th century. A highly developed country, according to Bell's viewpoint, is one where a high proportion of the population engages in university education.

This image of a knowledge society has little to do with the reality of economic development. Demand for all forms of labour is currently high in most developed countries, but the fastest growing segment of the labour market in many developed countries is the intermediate level which generally accounts for well over half the available jobs. The proportion of jobs requiring a university degree and of jobs requiring low skills are, in many cases, static or declining, whereas the demand for intermediate skills is rising. These skills are delivered by vocational training such as that typically available under the apprenticeship system.

1.1.2 The Principle of Vocationalism

Vocational education and training presupposes vocationalism in the world of work. If vocationalism disappears, as the thesis of the patchwork biography (i.e. the view frequently held in contemporary sociology that biographies are increasingly characterised by shifting phases and patterns of activity rather than the pursuit of a straightforward career) suggests, then a central point of reference for *vocational* education is lost. The question is therefore, how can the principle of vocationalism be reconciled with the dynamics of corporate organizational development and the necessity to ensure flexibility in the labour market? A popular answer is that the flexibilization of work and of the labour markets presupposes the flexibilization and modularization of vocational education or renders the latter unnecessary. However,

a comparison with academic professions shows that professionalism is a quite stable phenomenon and by no means in contradiction to the dynamics of labour market trends; thus the same is likely to be true of occupations serviced by the vocational education system.

1.2 Structure of the Volume

In the present volume, this renewed interest in the apprenticeship tradition and the various steps towards the implementation of innovative apprenticeship programmes are analysed and discussed from different perspectives. First, a number of chapters describe recent developments in apprenticeship training in different national contexts. Another group of chapters is devoted to the quality and profitability of apprenticeship as the most influential drivers of innovation in this field.

The first group of chapters is opened by the contribution by Bénédicte Gendron on the French vocational *baccalauréat* (cf. Chapter 2). Here, the institutional context of the VETBac diploma is presented and the conditions for competence development in a context of workplace learning are discussed. Peter Schlögl then discussed pathways for students from vocational education to higher education in the German-speaking (countries Chapter 3). The German-speaking countries are discussed from a different viewpoint by Felix Rauner, Wolfgang Wittig and Ludger Deitmer (Chapter 4), where the government structures in the dual vocational training systems in Austria, Denmark, Germany and Switzerland are analysed in a comparative qualitative study. It is argued that a coordinated model of governance with equilibrium of input and output oriented decision making is most suitable to a dual system of vocational training with its inevitable pluralism of administrative bodies. Barry Nyhan's chapter on the national apprenticeship programme in Ireland (Chapter 5) also analyses the political framework of apprenticeship and discusses the particular role of the 'social partnership' in Ireland. Chapter 6 deals with the Italian Apprenticeship Reform and outlines its impacts from national and regional perspectives. The evaluation of the development of integrated VET centres in Hungary is the topic of Chapter 7 by Magdolna Benke. Chapter 8 by Michaela Brockmann, Linda Clarke and Christopher Winch investigates the role of work-based VET in England (focusing on apprenticeship) and the particular role of employer interests. The work-based VET route in England is shown to have particular weaknesses due to: the generally low status of VET; its governance and especially the lack of representation of employee interests; and the growing difficulties of obtaining employer engagement. The chapter argues that the English VET system has much to learn from continental systems in overcoming its weaknesses. Richard Sweet and Helmut Zelloth, in their previously mentioned contribution, investigate programmes in several Mediterranean countries (namely Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, Syria, Tunisia, Turkey, and the West Bank and Gaza) that combine work-based learning with learning in classrooms (Chapter 9). Erica Smith then discusses the role of agencies dealing with apprenticeship in Australia (Chapter 10), noting their contribution to increased apprenticeship numbers in that country. The series of

country studies concludes with a chapter by Robert Lerman on apprenticeship in the United States (Chapter 11), a county where apprenticeship currently plays a minor role.

While the country studies give an overview of the general situation concerning apprenticeship in selected countries, the volume also includes contributions that take an issues-based approach related predominantly to the quality and the economic aspects of apprenticeship training. First, Philipp Grollmann presents a study on the professional development of trainers (Chapter 12). His chapter presents the results of the analysis of two typical cases. The motivation of learners in the context of vocational education and workplace learning is the topic of Chapter 13 by Natasha Kersh and Karen Evans. The paper focuses on the factors that may facilitate the links between the college and workplace settings, considering in particular those factors that may stimulate learners' motivation towards competence development and workplace learning. Chapter 14 by Jeroen Onstenk discusses coaching and collaborative work-based learning in Dutch VET. The chapter gives an overview of recent developments concerning coaching and new learning arrangements, which are considered an important factor of quality assurance in VET. Finally Felix Rauner and Lars Heinemann (Chapter 15) present a self-evaluation tool for companies that allows for the assessment of the cost-effectiveness and the quality of apprenticeship training on the part of the training companies. The tool was implemented in the course of a regional survey with more than 100 companies in the Bremen region. The results presented in the chapter emphasize the importance of high quality training, demonstrating for the first time the positive correlation between quality and cost-effectiveness in apprenticeship.

1.3 Conclusion

This book makes an important contribution to the international apprenticeship literature. It draws together some of the leading researchers in the area, and provides a body of knowledge on current practices and issues that has previously been lacking in this complex interdisciplinary field. The lessons learned from countries' experiences, as presented in these pages, provides a valuable platform for policy-makers and scholars alike.

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Chapter 2
Competence Development Through Workplace Learning: The Case of the French Vocational *Baccalauréat*

Bénédicte Gendron

2.1 Introduction

Before the vocational *baccalauréat*'s creation, the French educational system was organized hierarchically: on one hand, the opposition between general and technological education and vocational education programme and on the other hand, the opposition between short studies and long studies. At the secondary level of education, in one side the general *baccalauréat* track (considered as the prestigious one or 'regular' track) was enrolling students who were focused on higher education pursuit and in another side, the vocational track, with the *Certificat d'aptitude professionnelle* (CAP) and the *Brevet d'études professionnelles* (BEP) was considered as the track of 'relegation', it was seen negatively with students facing academic, social or personal difficulties (and who were not accepted on the 'general' track mentioned above). But since the creation of the vocational *baccalauréat* track in 1989, this diploma has created a major innovation in the French initial secondary education system. In its objective and in its innovative way of learning combining sandwich courses (workplace and school-based learning), this programme offers students who were failing at school a path for continuing their studies or a springboard to jump into a new career or professional plan (Gendron, 2005). This diploma has been set up and implemented in different ways: through student status or in apprenticeships, through the responsibility of the Ministry of Education in vocational high schools, but also under the responsibility of the Ministry of Agriculture as, for instance, in the *Maisons familiales rurales* (the two foci of the present paper). First, this paper will present the institutional framework: what is the vocational *baccalauréat* (VETBac) diploma, what are its roles and purposes? And, as the national French system of education from the Ministry of Education has been the subject of a number of articles in European VET reviews (Gendron, 2005), the *Maison familiale rurale* (MFR) system, which is less known, and its philosophy will be presented more in details here. The second part will give some insights into the

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convergence and divergence of the conditions of competence development of vocational *baccalauréat* trainees or students with a workplace learning focus in those two organizations: the vocational *lycée* from the Ministry of Education and the organized MFR under the Ministry of Agriculture.

2.2 Framework: The Vocational *baccalauréat* Diploma in France, its Purpose, Organization and Implementation in Vocational *lycées* and in the *Maisons familiales rurales*

2.2.1 The Vocational baccalauréat *Diploma*

2.2.1.1 A New Level of Diploma

The history of the VETBac is recent from a French perspective. The Ministry of Education created this 'new' diploma at level IV (see Fig. 2.1) called VETBac, which was announced in December 1985. The purpose was to promote and revalue vocational education in schools now called vocational *lycées,* and thereby to allow students in such schools to be recognized as *bacheliers*, a dignified title before only given to general and technical education schools students.

The desire to make education more democratic was marked by the Ministry of Education's objectives in the Guidance 1989 Law which stated that the 'Nation wants to lead 80 per cent of a typical age group to the baccalauréat level'. Such

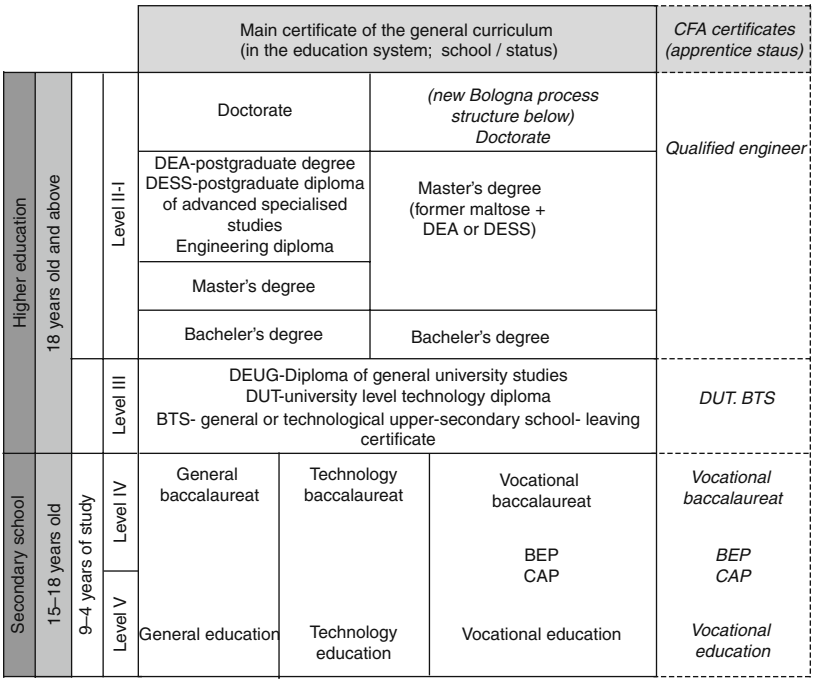

Fig. 2.1 The French secondary and higher education system

an objective implied that technical and vocational education should take part in this national effort: the proportion of CAP and BEP holders wishing to pursue their studies and not to enter working life was previously only 20 per cent. The revision of vocational education happened also at level V through the creation of technical classes at the fourth and fifth grade. In addition, the BEP was revised, which now prepares up to the VETBac level.

2.2.1.2 A Pluralistic Objective of the VET *baccalauréat*

The VETBac diploma was created in the context of a crisis in youth employment and in important structural changes in production and labour organization requiring new training and qualifications. Its goals were plural. The first was to respond to the growing demand from businesses for highly qualified production and maintenance workers with qualifications between those of advanced technicians, who hold an advanced technical certificate (BTS) or technological university diploma (DUT), and qualified workers who hold a CAP or BEP. The level of the latter appeared increasingly insufficient to keep up with the development of new technologies in the production of goods and services (computer-assisted design and manufacturing, robotics, office automation, automated production techniques, and computer science for industrial and management applications). A second objective was to respond to the development of new maintenance techniques for personal electronic and computer equipment (as video recorders, personal computers, and video disks). Moreover, its creation was also to boost vocational education and to enhance cooperation and the relationship between business and schools through the compulsory internship period. They were created in close collaboration with employers in the aim to train the VET attendees for specific skills for the labour-market needs. They differ from technological *baccalauréats* as they are targeted at specific occupations, whereas the technological *baccalauréats* are broader in scope (electronics, mechanics, etc.).

2.2.1.3 Vocational *baccalauréat* Principles

VETBac training lasts 2 years (there has recently been experimentation in preparing the diploma in 3 years directly from secondary school) and constitutes the final cycle in the vocational route (first and terminal vocational classes). Unlike the technological *baccalauréat*, the VETBac is primarily a vocational certificate leading directly to an occupation; although its diploma also entitles holders to enter university studies, less than 15 per cent entered in 1995. The VETBac provides qualifying training for a particular occupation and admits candidates holding a BEP (or a CAP prepared in 2 years after the third class) corresponding to the VETBac concerned (if the experimentation is extended, it might change in the future). Even though the trend of moving from secondary to tertiary education was less common among technological *baccalauréat* graduates 10 years ago, now, more than one third of students go further. The VETBac maintains its aim and role of terminal diploma: 15 per cent of VETBac graduates nowadays continue further studies.

Some national data (Tables 2.1 and 2.2):

Table 2.1 Access rate to education level IV (all initial education courses combined) in per cent

	1980–81	1990–91	2000–01	2002–03	2003–04	2004–05
General *bac* options	22.1	33.4	34.2	33.9	34.1	34.9
Technological *bac* options	11.9	17.6	21.7	21.1	20.8	20.5
Vocational *bac* options	0.0	5.0	14.0	14.2	14.6	14.5
Total	*34.0*	*56.0*	*69.9*	*69.3*	*69.5*	*69.9*
Other MEN	33.0	54.0	63.4	62.9	63.1	63.7
Agricultural	1.0	1.4	2.8	2.7	2.6	2.6
Apprenticeship	0.0	0.6	3.7	3.7	3.8	3.6

Source: France. National Ministry of Education; Development and Publications Department, 2005.

Table 2.2 Evolution in the distribution of students in the final classes (1995–2005)[1]

	1995		2000		2005	
	Numbers	per cent	Numbers	per cent	Numbers	per cent
General *bac* options	**349,100**	**57.5**	**319,622**	**52.1**	**322,455**	**52.2**
– Bac S (including agricultural)	163,082	47	157,778	49	162,048	50
– Bac L	89,880	26	66,645	21	59,928	19
– Bac ES	96,138	28	95,199	30	100,479	31
Technological *bac* options	**173,387**	**28.6**	**187,455**	**30.6**	**179,897**	**29.1**
– STG	86,522	50	99,760	53	93,896	52
– STI	51,371	30	46,802	25	44,058	24
– SMS	19,119	11	22,650	12	24,667	14
– STL	6,988	4	7,562	4	7,916	4
– Other technical MEN	4,683	3	3,442	2	2,781	2
– Agricultural	4,704	3	7,239	4	6,579	4
Vocational *bac* options	**84,216**	**13.9**	**106,390**	**17.3**	**115,026**	**18.6**
Production	35,910	43	51,231	48	55,796	49
of which apprenticeship	*3,785*	*4*	*9,822*	*9*	*11,842*	*10*
of which agricultural	*594*	*1*	*7,933*	*7*	*8,264*	*7*
Service	48,306	57	55,159	52	59,230	51
of which apprenticeship	*3,227*	*4*	*5,881*	*6*	*6,616*	*6*
Total	**606,703**	**100**	**616,467**	**100**	**617,378**	**100**

[1] The percentages in bold type indicate a given line's share in the overall total; the other percentages show a given line's share in the overall numbers of the type of *baccalauréat* in question (general, technological or vocational). Thus, at the start of the 2005 school year, pupils in vocational year 13 amounted to 18.6 per cent of the total, of which 49 per cent (all categories included) chose a production option. Among these, 10 per cent were enrolled with apprenticeship status.

Abbreviations used:

Bac S: *baccalauréat scientifique*

Bac L: *baccalauréat littéraire*

Bac ES: *baccalauréat économique et social*

STG: *baccalauréat technologique, série Sciences et technologies de la gestion*

STI: *baccalauréat technologique, série Sciences et technologies industrielles*

SMS: *Sciences médico-sociales*

STL: *baccalauréat Sciences et technologies de laboratoire*

Source: France. National Ministry of Education; Development and Publications Department, 2005.

2.2.2 *The* Maisons familiales rurales*: Genesis and Evolution*

2.2.2.1 Genesis and Evolution

The first MFR was established in the south west of France in 1937 when a farmer wanted one of his children to go further into education after his *certificat d'études* (first diploma of the French education system at the time). This visionary farmer, leader of the local professional organization with other interested parents, supported by the parish priest militating for the rural cause, were convinced that, to be a successful farmer, it was necessary to acquire more knowledge, both theoretical and technical. In order to allow their children to get further education and a broader approach to rural issues, they decided to buy a house naturally called *Maison familiale* (family house) and recruited a technician in order to provide training for the young people, as well as giving advice to the parents as farmers. In 1941, the MFR acquired the status of association (according to the French '1901' law) in order to be able to act quite freely. In the same year, they created the *Union nationale des Maisons familiales rurales* (National Union for the *Maisons familiales rurales*).

The MFR are non-profit organizations focused on vocational training programmes under the responsibility of the Ministry of Agriculture. Nowadays, the organization consists of about 460 associations altogether in France. A World Federation was created in 1975, the International Association of *Maisons familiales rurales* (AIMFR) with their European, African and Latin America representatives.

They are provided with resources (staff and premises) from the State, the territorial structures and various partners (associations, non-governmental organizations, professional partners, etc.) in order to set up training and development schemes which are based on the following essential principles:

- Families' responsibility in the management of the association and in its choices (which type of training to set up, which people concerned, what financial means?);
- General training combined with professional training in relation to real-life situations through an alternate training system (apprenticeship, sandwich courses);
- Global approach to education;
- Involvement of the young people and adults from the MFR in the development of the region where it has been set up with the very close cooperation of all local partners.

Indeed, a MFR always starts with the determination of families who decide to change their conditions of life, to increase their autonomy and give real answers to the questions about their children's future and the environment they live in. They are set up on shared principles (individual and collective responsibility, involvement of the individuals and the communities, implementation of alternate training system and actions of development).

2.2.2.2 Some Figures

A survey carried out in France shows that, as well as the 40,000 families taking an active part in some 450 associations, more than another 100,000 people join in young people's training and rural development.

- 10,000 members from the Board of Directors lead the associations and manage the *Maisons familiales;*
- 3,500 *moniteurs* and *monitrices* (trainers);
- 12,000 permanent training managers;
- 30,000 occasional training managers;
- 11,000 people in charge of agricultural, craft or service enterprises that lead study tours;
- 22,000 professional representatives who take part in the assessments organized by the *Maisons familiales*;
- 15,000 specialist speakers, technicians, who bring information and ideas resulting from their experience.

2.3 The Role of Different Stakeholders in Designing Conditions for Competence Development Through Innovative Apprenticeships: Convergence and Divergence of the Vocational *baccalauréat* Training from the Vocational *lycée* of the Ministry of Education and from the *Maisons familiales rurales* of the Ministry of Agriculture

2.3.1 Origin of the Research, Data, Methodology and Data Collection

This research is based on quantitative and qualitative textual data analysis. The research on VETBac of the vocational *lycée* was part of a European Leonardo Project on the 'Analysis and comparison of social representations of VET in different European countries' (Gendron, 2005). For its national part, its main aim was to depict how VET is perceived by different social actors (those directly involved as learners in training activities, those belonging to the world of business, and those who perform roles of teachers/trainers), and in so doing, exploring the implementation and the functioning of such training activities.

The data were collected mostly through focus group interviews. Six vocational *lycées* from Low-Normandy were investigated and five groups of people were interviewed (learners, trainers, deans, *baccalauréat* holders, employers, workers). In all, 60 people were interviewed and analyzed through a qualitative methodology (focus group) and quantitative and qualitative textual data analyses (Alceste & Modalisa software).

The data from the VETBac of the MFR are from a case study based on interviews with different officials[1] from a MFR in the Midi-Pyrénées (Moissac) and the experience reported by the trainers, the director and administrator of the MFR of Moissac. This center has about 140 students (among them 20 VETBac trainees). In this case study will be analysed the VETBac 'Commerce' set up in 2001 in Moissac.

2.3.2 Divergence and Convergence

The two systems (the MFR of the Ministry of Agriculture and the vocational *lycée* of the Ministry of Education) both prepare students for the same vocational *baccalauréat* diploma, while in terms of innovations and conditions of competence development through workplace learning, they can differ.

2.3.2.1 Convergence

- Same national diploma: 2 years of training;
- The audience: the trainees are between 18 and 19 years old. They are older than the regular general *baccalauréat* trainees because many have experienced failure situations or schooling difficulties;
- Sandwich courses: periods of times at school and others in enterprises; compulsory period of training in companies;
- All companies have a tutor (person in charge of the trainees in the company);
- Companies involved in the trainee and training assessment;
- Innovative and motivated training staff focus not only on professional development but also on personal development: developing socio-emotional competencies, assessing and favouring *savoir-être* and guiding 'hurt' people toward success, in accordance with the MFR movement's slogan: *Réussir autrement.*

2.3.2.2 Divergence

- People trained in the *lycée* have student status as opposed to a work contract with a company (they are workers); those latter are called *apprentis*.
- A different philosophy regarding institutional organization: a public organization versus an association of families. The MFR structure implies a certain number of rules. Families are involved and vote for their members in the board of directors. The board of directors meets regularly in order to ensure a smooth running of the association. Their main concern is with employing and supporting *moniteurs* (trainers) and managing them, and looking for solutions in education training

[1] Interviews were conducted with J.-C. Floutard, administrator of the MFR of Moissac, France and responsible for a Leonardo project, the fr/04/B/P/PP-151103 International Wine Trade Pilot Project *«Professionnaliser par la formation le milieu viticole des régions européennes afin d'intégrer l'exportation dans ses pratiques commerciales»*; C. Gendre, trainer at the MFR of Moissac; and P. Varnier, Director of the MFR of Moissac, France.

and the development of the area. Regular meetings with all the actors and stakeholders of the MFR (families, trainers, trainees, tutors from companies, etc.) are opportunities to analyze the results of the endeavours started, to decide on new ones and to fix problems.

- Training staff: civil servant – teacher – versus private contract – trainer – or *moniteur*: this difference in title relates not only to the status but also to the philosophy and the art of the job. The teachers are civil servants and teach a certain number of hours per week, which are planned in the beginning of the academic year. In the MFR, the *moniteurs* and *monitrices* stay at the MFR centre all day. Their title, 'monitor', implies their various functions: they guide, animate, help, teach, etc. They facilitate the creation of relationships within the group, teach, take an active part in forwarding educational aims while supporting each youngster's project. They are qualified to implement the alternate training system and they know the MFR's environment, the youngsters, their families, the training managers and company tutors very well. They are involved in the development of economic activities in the area where the MFR are located.
- This way of working relates to the different pattern of alternance. The importance given to the training organisation between 'school' and 'work' periods varies according the nature of the alternance pattern (sandwich courses organizations) and determines its modes of organization.

2.3.2.3 Diversity of the Alternance Patterns (Sandwich Courses Organization): 'Juxtapositive' Versus 'Integrative' Learning System

- If from a *lycée* perspective, the vocational *lycées* are innovative in comparison to technical *lycées* in the way their courses (sandwich courses) are organized and developed with companies, they nevertheless also differ from the MFR. Looking at the organization of the sandwich courses in the agenda, we already observe differences.
- Sandwich training courses: In the VET *lycée*, the periods on-the-job training can be organized according to the school but mainly at the end of the year's schooling. During the 2-year programme, trainees have 16 weeks of in-company training. In the MFR, the system differs greatly, as they have organized effective sandwich courses. The agenda is organized in sessions, sharing training programmes between two periods of time: a period of work in a company (farm, enterprise, etc.) and a period of study at the MFR centre.
- From the perspective of effective sandwich education, the VETBac sandwich course organization in *lycées* remains 'juxtapositive' versus 'integrative' in the MFR. Thus, they could be seen as traditional and less innovative. The reason for this is that, in the vocational *lycée*, the sandwich courses are organized according to two places – schools and companies – and their respective agendas, i.e. in successions of durations and places. Each place and time has its own logic and objectives, which might not necessarily be linked to one another. Indeed, the link between the stakeholders can be only institutional but neither organizational nor operational. The trainee will have to make the bridges and links

between knowledge acquired on the job and the knowledge provided at school. The trainee's difficulties can result from this discontinuity between the two kinds of knowledge. In some cases, the sandwich courses are conceived as a time for socialization, or as a first approach to work reality without real supervision or without a combined school and work learning experience. They represent juxtapositions of knowledge, times and places. In such situation, academic knowledge remains predominant and the logic of the training is more focused on certification (diploma-oriented) than on professionalization.

- For the MFR, according to their original philosophy, the work situation is at the core of the training system and process. The pattern of alternance is seen as an integrative learning system combining and connecting work and school learning experience. The knowledge acquired during the period of on-the-job training is used at the training centre as the starting point of knowledge building (except for 'traditional' academic subjects, such as maths, etc.). This integrative system requires staff to coordinate and organize the different training periods in collaboration with all stakeholders. This kind of training programme is hard to implement and to explain in relation to timetabling for training staff. They all work full time and stay at the training centre all day. For instance, since the agenda is developed according to company needs, the timetable is organized and reorganized weekly. The integrative pattern is based on the principle that knowledge, whatever its source (from ground experience, from the job situation, etc.), is valuable and has to be connected with all knowledge in its entirety. Above all, experiential learning within the work context provides the opportunity to reflect on it and to transform this experience into knowledge. To allow such knowledge building, the MFR has implemented a *plan d'études*. This tool is a set of questions prepared before each company training period. During this period, trainees, beyond their professional tasks in the company, have to raise these questions to their tutor to find out more about the work, the company and its environment. Back at school, trainees discuss this material with their trainers and share it with their peers. This material is then used as the starting point for a lesson. In case important elements are missing, this extra information is provided in the lesson by the trainer. This organization, and the role of the work-based knowledge, shape different trainee/trainer relationships. Trainers not only train but vitalize the material given by trainees, guide their thoughts, manage the links between companies, visit trainees at the workplace and work with the in-company tutors. Therefore, the traditional link between trainer and trainee is modified towards linking the various places of skills development and the types of knowledge, each one finding its own continuation and use in the other.

2.4 Conclusion

These different vocational education programmes presented have different shapes but, whatever their structure, they play an important role and involve different roles for the young people enrolled. VETBac trainees seem to benefit from a longer

period of schooling and the new way to learn focused on workplace learning and its organization in sandwich courses. Whatever the institution, all training staff were motivated and felt invested with a mission: to rebuild trainees' self-esteem to help them rediscover the way to succeed. To do so, trainers innovate in different ways. But it emerged that, beyond the divergence, the convergence was in designing innovative conditions to develop competencies by using the workplace as a motivating source of learning, underlining the crucial role of on-the-job training as a key factor of competence development and accomplishment.

Precisely, the development of socio-emotional competencies (OECD-DEELSA, 2002): autonomy, adaptability, self-confidence, conflict management, catalysing changes, teamwork competencies, etc., those emotional competencies essential to perform one's job nowadays, were a major element and key competencies base for trainers in their training, whereas they are neglected in 'traditional' and general school systems. Those results regarding the competencies developed could be analysed through the conceptual model of Emotional Capital[2] (Gendron, 2004).

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Chapter 3
The Transition from Vocational Education and Training to Higher Education in the German-Speaking Countries

Peter Schlögl

3.1 Introduction

In the German-speaking countries, vocational and higher education are both very important, widely accepted and boast long traditions. However, this does not mean that either of these sectors of the education system is related systematically to one another in any of the countries studied in this context. The sector of vocational education and training (VET), which is strongly geared towards capacity building and which represents the key element of the upper-secondary level in the three countries Germany, Austria and Switzerland, and absorbs larger proportions of age groups who have left school than general education programmes, is in fact designed very differently.

The higher education (HE) segment, by comparison, has a more international design, at least structurally, which has recently led – also due to the Bologna initiative by the European Union – to greater convergence. In addition, over the past few years, so-called 'universities of applied sciences' (in German: *Fachhochschule* institutions) have been set up in all three countries, which pursue the educational objective of HE-based VET. However, when analysing them in closer detail, one quickly identifies highly differentiated design forms of HE programmes between and partly also within the countries under investigation.

As of the second half of the 14th century, universities emerged in the German-speaking countries as new educational institutions alongside the Church and municipal Latin schools. At that time, schools and universities were independent of one another and fulfilled partly overlapping tasks but had different activities and legal status: Whereas schools were regional or local institutions (*studium particulare*) without any corporative rights, the emerging universities represented 'cooperative associations of people with a high degree of corporative autonomy' (cf. Wolter,

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1997, p. 20),[1] which provided study programmes (*studium generale*) of supra-regional importance. At that time there were no access regulations for universities that depended on previous education; but access options were restricted by a series of barriers (e.g. estate, gender-specific, religious and financial). The HE institutions themselves made sure that their students boasted the prerequisite education: Future students first had to complete the 'faculty of liberal arts' (i.e. preparatory philosophy courses) before being admitted to higher faculties.

The connection between the exams termed *Abitur*, *Matura* or *Reifeprüfung* and university access was first established in Prussia (as of 1812), subsequently in all regions, and then finally the possibility of HE access was made dependent on completion of a school-based university entrance certificate. From that time onwards, schoolchildren taught privately had to complete an external *Abitur* at a recognised *Gymnasium*.

3.2 The Issue of Comparison

This side-by-side existence of HE and VET sectors over years, decades, sometimes even centuries, is, however, increasingly posing challenges to all three countries. The need in certain branches for more knowledge-based economic development, more individual education paths, and the requirements to make education processes accessible over the entire lifespan – and this with largely stagnating education budgets – increasingly puts interfaces, transitions and the transfer of learning outcomes, whether acquired in formal, non-formal or informal learning arrangements, into the focus of attention. This has consequences partly for HE institutions themselves and for study structures, but also for the arrangement of the above-mentioned potential future students.

In educational policy discussion of the past 10 years, from the large number of questions emerging in this connection, two have come into the foreground as particularly important, namely: vertical permeability from VET at the upper-secondary level to the HE sector, and horizontal permeability of continuing vocational education and training (CVET), or the acquisition of higher qualifications, to reach that level. In connection with this was the expectation – or rather hope – that non-traditional students, in particular those who do not reach the HE sector within the prevailing period of time or in the typical institutional sequence or boast regular access qualifications from school or aim at full-time study, could benefit from that innovation (cf. Schuetze and Slowey, 2000).

The following will describe initiatives, mostly undertaken in the 1990s, to structurally link and define transition scenarios between VET at the upper-secondary level and HE programmes in Germany, Austria and Switzerland. The objective of this chapter is to analyse the fundamental educational policy conception of HE access, identify innovations made within the period of interest for this topic, and conduct a quantitative evaluation.

[1] In the legal language of that time, the term 'universitas' denoted a corporation or guild (cf. Boockmann, 1999, p. 14).

3.3 Three Countries, One Objective, but Three Concepts

The identifiable common strategy of the three countries of interest in this context consists in opening up HE access to individuals with work-based experience; VET is to be upgraded by the fact that young people select these programmes, can see for themselves the prospect of a long-term supplement to their qualification without 'returning' to general-education schools, and that HE-based provisions for lifelong CET become accessible without having to complete entire grammar-school-based education programmes.

Apart from considerable subject-related difficulties involved in such political projects, one formal aspect can be discerned in all three countries as particularly problematic, namely that the political stakeholders, educational practitioners and economic actors of these sectors are different in each case and that a culture of co-operation, trust and joint steering instruments cannot really be identified in this regard. Another common feature is that the VET sector is in the role of a 'petitioner' or 'wooer' while HE institutions invoke their tradition of canonised or research-guided knowledge and at the very least the claim of internationally validated standards of working and teaching methods and on that basis call for an adjustment to the access paths. To put it bluntly, it could probably be summarised as the difference between 'know how' and 'know that'. But apart from these epistemic differences, which undisputedly are of a complex nature, socioeconomic differences can also be identified between these sectors and – at least for the three German-speaking countries analysed here – socially inherent valuing of professional competence compared with academic knowledge, which clearly benefits the HE institutions and here, in turn, mainly universities.

In many cases, all of these aspects combined culminate in the question of HE access and its concrete design; and particularly in the questions: Which educational qualifications open up HE access and which are rated as insufficient? Which complementing certificates need to be furnished to obtain access? In German-speaking countries, questions regarding improvement of HE didactic coping strategies through heterogeneous study access groups, lectures aiming at harmonising levels, etc. are only at the very beginning.

In a European comparison, the Anglo-Saxon and Nordic countries can be identified as having a trailblazer role. Sweden, for example, implemented a basic HE access regulation ('25/4 regulation') for people over the age of 25 and with at least 4 years of professional experience some time around the 1970s, supplemented by a subject-specific study aptitude test. In the United Kingdom, the possibility of recognising non-formally and informally acquired knowledge (accreditation of prior learning) was introduced in the 1980s in the form of a standardised interconnected counselling and exam procedure.

In the following, transition models currently used in the three countries, which differ greatly however, will be compared in a concise form. The analysis will focus, on the one hand, on their concrete structures and, on the other, their utilisation in practice. An interesting detail in passing: all three countries basically have a federal state structure and their valid competence legislation is therefore highly important.

3.3.1 Germany

In Germany, the overall situation is difficult to assess. This is primarily connected with the fact that the HE legislation competence falls into the sphere of the *Länder* and there exist 16 (!) different designs of legal and institutional conditions. A comprehensive overview of the situation – albeit not completely up to date – is provided by a synopsis published by the Standing Conference of Ministers of Education and Cultural Affairs (KMK, 2003) concerning HE rights and existing opportunities of HE access for professionally qualified applicants without any school-based HE access qualification on the basis of HE legislative regulations and concerning the issues not only of entitlement to enter the first specialist semester but also of the possibility of credits, which however is only rarely the case (see KMK, 2003). Important qualifications listed in this context include VET qualifications, master craftsperson certificates, CVET diploma, each partly combined with exam success, or in some cases requiring several years of relevant professional experience. In other cases, successful completion of entrance exams is a prerequisite for access.

In addition it should be emphasised that, obviously, the dual existence of vocational training and HE was traditionally rated as functional and as two alternative paths, which in some cases still applies today (cf. Banscherus et al., 2008). From this it is possible to interpret that transition from VET to HE is understood as a reorientation or even correction in the individual life plan.

The designing of HE access, apart from access via the *Abitur*, is regulated not only by HE legislative frameworks by the *Länder* but also by possible statutes of the HE institutions themselves. With the establishment of the *Fachhochschule* programmes in the late 1960s, there emerged the need also to regulate access to HE institutions of this nature. Proof of a general, subject-linked or *Fachhochschule* entrance qualification, or another previous education recognised as equivalent, was laid down as an access requirement.

Already at an early stage, the individual laws provided for related opportunities, as found by an analysis of the 2005 Report about a conference of the Federal Government and the *Länder* with the title *Hochschulzugang für beruflich Qualifizierte*. This is evidenced, for example, by a regulation from the *Land* North Rhine-Westphalia, which was adopted as early as in 1989: 'Adults with professional experience who have, due to their aptitude and previous education following professional practice of a longer duration, knowledge and skills of relevance for the study, but do not have the general HE entrance qualification, are entitled to take the HE access exam for especially qualified employees and, in this way, acquire general HE entrance qualifications.'[2] This shows that the approach is ambitious even though 'only' especially qualified individuals are mentioned. Although structural

[2]Federal Republic of Germany. Federal State Government of North Rhine-Westphalia. Verordnung über die Prüfung für den Hochschulzugang von besonders befähigten Berufstätigen (Prüfungsordnung gemäß § 26 b SchVG – PO-BBA) of 23 March 1989 (GV. NW. S. 208; GABl. NW. S. 241) – BASS 19–34 Nr.1 On the basis of § 26 b (2) Schulverwaltungsgesetz (SchVG) as amended by the Notification of 18 January 1985 (GV.NW. p. 155) as amended by the Act

regulations were laid down by an amendment to the HE framework law in 2004, creating the opportunity to take previous professional knowledge into account in admission to HE, and although there exists an agreement of the Standing Conference of Ministers of Education and Cultural Affairs from 2002, stating that up to 50 per cent of performance in a study programme can be furnished from outside the HE institution, these options have to date not been extended across the entire country. In a joint statement on the accreditation of vocational training to an HE study published in 2003, the Federal Ministry of Education and Research, the Standing Conference of Rectors of HE Institutions and the Standing Conference of Ministers of Education and Cultural Affairs advocated improved recognition of knowledge and skills acquired outside the HE institution for an HE study. They called on HE institutions to award credits e.g. for exams obtained in CVET if the academic level is appropriate for a course.[3] On that basis, some options of this type have been implemented, however, it has remained a rather rare exception – even less frequent than access to universities via job-oriented secondary school branches or paths (see below).[4] This shows that in Germany there is no lack of declarations of intent and regulations of framework conditions. Concrete implementation lags behind.

Other options that have not been implemented on a nationwide basis are double-qualifying education paths. Pioneering the development of double qualifying education paths was a dual vocational college in part-time form in the Federal *Land* of Baden-Württemberg in the 1975/76 school year and a college pilot in the Land of North Rhine-Westphalia in 1977/78. Related preparation in each case is provided in classes supplementing original vocational school instruction and the accreditation of vocational qualifications for the *Fachhochschule* entrance certificate. Non-integrated procedures such as in combination with evening attendance of upper-secondary vocational school (*Fachoberschule*) had even existed before that time. In the process of increased interest in improved formal linking of general education and vocational training, the Standing Conference of Ministers of Education and Cultural Affairs in 1998 made an agreement on the acquisition of *Fachhochschule* entrance qualifications in vocationally-oriented training paths in order to safeguard the nationwide validity of qualifications. This agreement proceeds from the assumption that vocational programmes, dependent on the respective education objectives and content as well as their duration, can lead to the holders' comprehensive ability to study at tertiary establishments, in particular regarding the learning and working techniques required. The concrete implementation of this agreement is made at the *Länder* level, and the development of implementation is fairly different there, both regarding the multifacettedness of schemes and regarding

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of 19 March 1985 (GV. NW. S. 288), a regulation is adopted with the consent of the *Landtag*'s Commission for School and Continuing Training.

[3]Germany. Bund-Länder Commission for Educational Planning and Research Promotion (2005). *Hochschulzugang für beruflich Qualifizierte.* 20 January 2005. p. 7.

[4]See Fichtner, D. (1983). Es handelt sich um keine Wohltat. *Deutsche Universitätszeitung* Nr. 9/81, pp. 298–300. See also Lipsmeier, A. (1983). Berufsbildungspolitik der 70er Jahre im Kontext der Bildungspolitik. *Zeitschrift für Berufs- und Wirtschaftspädagogik*, Supplement 4, pp. 1–14.

the number of provisions and of affected trainees. In 2007 a total of 179 different schemes with 1,667 provisions and 7,526 trainees were counted.[5] Compared to the total size of VET this is a fairly modest segment. All provisions have in common that time- and content-related specifications comprise 240 teaching units each in the language field and in the mathematical-scientific-technical area, including economic science content. Due to differentiated instruction at vocational school (*Berufsschule*), therefore, instruction goes beyond the framework curriculum of the respective training occupation. The various schemes – the number of which is surprisingly high (see above) – differ considerably in terms of structure and here, in turn, in the number of weekly lessons, which is between 4 and 18. Correspondingly, training-accompanying stages have different durations of between 2 and 3½ years. It can definitely be assumed that trainees have to bear a considerable extra burden – probably not only in terms of time – as this provision must be completed in addition to traditional school-based and in-house training sections, which are already full-time concepts. To relieve this burden, some schemes provide for the end dates of programmes and exam dates to be separate in order to enable candidates to prepare themselves for exams; in the Free State of Bavaria, for example, this period of preparation for the *Fachhochschule* entrance exam is six months. Overall demand for this provision has not been very pronounced, for which reason some of these programmes have not been implemented or have been terminated due to lack of interest.

A third path comprises the sector-specific continuing vocational education and training (CVET) systems currently under development.

As a first step in 2002, the IT Further Training Regulation (*Fortbildungsordnung*) was adopted pursuant to the Vocational Training Act (*Berufsbildungsgesetz;* BBiG). Apart from introducing exam boards at some chambers of industry and trade to conduct exams for 'operational' and 'strategic' professionals pursuant to this IT Further Training Regulation, the first certification body was accredited in 2003 to identify the competencies of a certified specialist, the first level of the new IT CET system, in compliance with the legal bases agreed on, the DIN ISO 17024 standard. The first exams for operational professionals were held in 2005. Thus the IT CET system is considered as implemented and comprises an entire series of innovative elements, from the didactic concept of workplace-oriented learning and the certification procedure to the international dimension of qualifications. Acceptance of the certificates obtained, which basically orient themselves towards the Bachelor and Master study cycles pursuant to the Bologna process of European establishments of higher learning, cannot however yet be identified.[6] Additional sector-specific CET systems are in the preparation stage.

At the beginning of the 2004/05 academic year, 86 per cent of those admitted to German HE institutions for the first time came via a university entrance qualification obtained at grammar school (*Gymnasium*), some 10 per cent via general university entrance qualification on the basis of a vocational grammar school

[5] www.ausbildung-plus.de

[6] For first evaluation results and more in-depth documentation see www.bibb.de

(*Fachgymnasium*), 2 per cent via completion of an evening-form grammar school (*Abendgymnasium*), and only 1 per cent of first-time students did not have any *Abitur* certificate.

3.3.2 Austria

The Austrian secondary school-leaving certificate *Matura* is unique in European comparison, as it was until recently the only secondary school-leaving certificate that awarded holders 'unconditional study access': In principle, every holder of a *Matura* used to be entitled to access every study programme (with the exception of study programmes requiring entrance tests, such as in Music or Sport) at every Austrian university, notwithstanding the quality of the *Matura* certificate and regardless of the actual capacity or overcapacity of a university department or school. This is contrary to most other European countries, where the secondary school-leaving certificate represents a necessary but not sufficient prerequisite for admittance to tertiary studies. As regards *Fachhochschule* programmes, which were newly established in Austria in 1994, a different practice was pursued and specific study place capacities were laid down and selection procedures conducted within the responsibility of *Fachhochschule* institutions. It was only after a judgement of the European Court of Justice in 2005 regarding non-discrimination of EU citizens in admission to studies that study places were regulated in selected study programmes (of particular importance here was Human Medicine).

Apart from the general-education *Matura* certificate (obtained at secondary school), additional access options to the post-secondary and tertiary sector have been in place in Austria for a long time. Anyone wanting to enrol on a specific regular university or HE programme that requires the *Reifeprüfung* (i.e. *Matura*) certificate is entitled to apply for the general university entrance certificate (*Studienberechtigungsprüfung* or SBP) at one of the Austrian HE institutions if they have reached the age of 22, are Austrian citizens, can furnish proof of previous knowledge acquired through job-specific programmes or non-occupational paths that must have been successful to an extent clearly exceeding fulfilment of general compulsory schooling, as well as being related to their desired (first) study, and if they have not yet attempted unsuccessfully to take the *Studienberechtigungsprüfung* for the desired study programme.[7]

Double-qualifying education paths have a long tradition and enjoy high acceptance in Austria. The first schools that awarded qualifications for professions were set up as early as with the establishment of state-school education under Empress Maria Theresia in the late 18th century. Nowadays such schools exist at intermediary and higher levels in commercial, engineering, industry and trade sectors, as

[7]Higher Education Entrance Act (Studienberechtigungsgesetz, StudBerG), Federal Act of 27 June 1985, BGBl. no. 292, on the acquisition of study programme related study qualifications at universities and schools of art and music, BGBl. no. 292/1985, last amended by BGBl. I no. 136/2001.

well as in additional fields, and specifically the higher forms, which award higher vocational qualifications and general HE access, have been improved considerably since the 1970s. Since the mid-1990s, more *Reifeprüfung* exams have been taken at VET colleges (BHSs) than at general secondary school forms. Depending on the subject specialisation, 50–100 per cent of the graduates from these schools change to post-secondary or tertiary programmes. *Werkschulheim* institutions represent a rare special form in the Austrian school system in that they combine secondary school (*Gymnasium*) education with qualifications for selected recognised training occupations.

Two educational policy innovations of interest in this context are, first of all, access on the basis of relevant professional qualifications, which became possible within the framework of the introduction of the *Fachhochschule* sector in Austria in 1994, and the so-called *Berufsreifeprüfung* introduced in 1997 on the basis of federal legislation.

Access to *Fachhochschule*-based Bachelor and diploma programmes is regulated in the *Fachhochschule* programme and accredited applications of the individual programmes. The legal basis for access without the general university entrance qualification (*Reifeprüfung*) is the *Fachhochschule* Studies Act.[8] This Act stipulates that a relevant subject-related qualification can be recognised as an access prerequisite. This decentralised specification of a form of access was an innovation for Austrian HE institutions. The notes on the Government proposal[9] in this connection listed completion of a VET school (BMS) of at least 3 years' duration or a qualification from the dual system. Job-specific relevance must be assessed by the head of the teaching or research personnel.

Since the entry into force of the Federal *Berufsreifeprüfung* Act (BRP)[10] in 1997 and related amendments from the following years, graduates of the dual system (apprenticeship-leave exam), the master craftsperson exam, VET schools (*BMS*) of at least 3 years' duration, graduates of schools for healthcare and nursing (*Gesundheits- und Krankenpflegeschulen*), and graduates of other programmes are entitled to take the *Berufsreifeprüfung* exam on the basis of the practice-related knowledge acquired through their professional experience. The highest educational attainment of some two-thirds of BRP candidates is an apprenticeship diploma (cf. Klimmer and Schlögl, 1999) – which makes dual training the most frequent access path to the *Berufsreifeprüfung*. The BRP Certificate is equivalent to the Certificate of Secondary Education (and VET Diploma, the *Reifeprüfung* or *Matura* Certificate) taken at an academic secondary school (AHS) or a VET college (BHS) in so far as, pursuant to legislation, it provides general access to higher education and thus entitles holders to unrestricted access to studies at Austrian universities and *Fachhochschule* institutions and attendance at post-secondary VET courses and other post-secondary programmes in Austria that require the *Reifeprüfung*

[8] FH-Stg § 4 (2, 5 and 6).

[9] ErläutRV 949 BlgNR 18. GP, p. 12.

[10] BGBl. I no. 68/1997.

certificate. In the public service, the BRP is considered as a qualification for senior posts. The BRP consists of four partial exams: German, mathematics, one modern foreign language of the candidate's choice as part of the general education segment, and a specialisation from his or her professional field. The partial exams in the foreign language and the specialisation can be waived if candidates have successfully passed an exam that is equivalent in terms of content, exam form and duration, and level. These include, in the specialisation area, e.g. specific master craftsperson exams, a completed part-time industrial master college (*Werkmeisterschule*) or building craftsperson school (*Bauhandwerkerschule*), a specialist WIFI *Fachakademie* course, individual aptitude and specialist exams, etc. All exams that can result in the waiving of a partial exam are laid down by the competent Federal Minister by way of ordinance. From a formal perspective, the BRP can be seen as an external exam (that means: not requiring school attendance) taken at an upper-secondary school. The Ministry for Education, the Arts and Culture (BMUKK) is entitled to recognise as equivalent certain preparatory programmes taken at adult education provider institutions if the qualifications attained correspond to those of secondary schools or VET colleges. In such programmes it is also possible to take the respective partial exams. However, at least one of these partial exams must be taken at an upper-secondary school. This school will also decide about the candidate's admission to the BRP and issue the overall *Berufsreifeprüfung* certificate following completion of all partial exams. The minimum number of lessons for recognised programmes is 160 in German, 180 in both mathematics and the modern foreign language, and 120 in the area of specialisation. However, at least one of these partial exams must be taken at an upper-secondary school. At present, the Education Ministry is working on an integrated variant of the *Berufsreifeprüfung* that can be taken in parallel to in-house company-based training; for this purpose, existing pilot schemes have been evaluated. A nationwide valid framework scheme is in the preparation stage.

The number of HE students who have used unconventional access paths has been rising slowly since the implementation of *Fachhochschule* programmes in 1994. Nevertheless they make up a modest 3.3 per cent of all students in the 2004/05 academic year (apprenticeship, VET school and part-time industrial master college). Therefore, despite steady increases since the introduction of the BRP in 1997, the two qualifications SBP and BRP accounted for 5.3 per cent in the last academic year (Archan and Schlögl, 2007).

3.3.3 Switzerland

In Switzerland, the university entrance certificate (*Maturität*) obtained at Swiss high school (*Gymnasium*) grants holders access to universities and universities of teacher education (*pädagogische Hochschulen*). Applicants are only granted access to *Fachhochschule* following completion of a work placement. In 2006, a total of 19 per cent of young people in Switzerland obtained a *Maturität* certificate at secondary academic school (Switzerland. Federal Statistical Office, 2009).

At present, the main access path to a *Fachhochschule* is the professional baccalaureate (*Berufsmaturität*), even though other qualifications also entitle holders to be admitted to HE institutions of this type (e.g. *Maturität* obtained at a *Gymnasium* with additional requirements, see above). *Berufsmaturität* also entitles holders – after taking a supplementary exam – to access university-type establishments. In 2006, 12 per cent of Swiss youth took a *Berufsmaturität* (Switzerland. Federal Statistical Office, 2009). The proportion of holders varies strongly between the Swiss cantons.

The chosen HE institution itself is in principle responsible for HE access and will therefore also decide about admission. As Swiss universities make high requirements on the subjects taken within the framework of the *Abitur* exam, HE access qualifications obtained abroad will in some cases not be considered as sufficient. In such cases, the applicant is obliged to take the Swiss or cantonal *Maturität* exam.

Graduates of the Swiss VET system have access to different HE paths. All of these have in common that they represent extensions or supplements to the VET sector. The key concept is the *Berufsmaturität*, which was introduced in 1993. It builds on extended general education supplementing IVET (*Grundbildung)* in a recognised training occupation. A Federal Certificate of Competence (*Eidgenössisches Fähigkeitszeugnis*) obtained within the framework of a 3- to 4-year IVET programme forms an integrated part of the *Berufsmaturität* certificate.

This *Berufsmaturität* certificate can be obtained via organisationally different paths: by attending a recognised VET path with final exams or in parallel (in an integrative form) to IVET at an advanced vocational school (*Berufsmittelschule*), commercial business school (*Handelsmittelschule*) or public training workshop (*Lehrwerkstätte*), following completion of a full-time IVET programme, or in a part-time form as a preparation for the final exam, or school-independently on the occasion of *Berufsmaturität* exams following completion of IVET.

In Switzerland, *Berufsmaturität* is offered by some 200 schools (advanced vocational, commercial business, some private schools and public training workshops). *Berufsmaturität* instruction comprises at least 1,440 teaching units accompanying the training and for all specialisations covers the same six basic subjects: first and second official national language, third language, history/civics, economics/business/law, and mathematics. This is supplemented by branch-specific special-focus subjects and one complementary subject.

Graduates obtain entrance qualifications for *Fachhochschule*, which was set up as a new education path on the basis of the 1995 *Fachhochschule* Act. The so-called *Passerelle* is a complementary exam to *Berufsmaturität*, was established in 2005 and entitles holders to be admitted to university-type HE establishments (a university or federal institute of technology, abbreviated to ETH) in Switzerland. Universities in other countries can, but are not obliged to, recognise the exam on a voluntary basis. Preparation for the *Passerelle* exam can be conducted either via distance learning in self-study schemes or at a school with the relevant provision. The first *Passerelle* exam was held in the spring of 2005 and implementation obviously still requires certain operational improvement, as insecurities have emerged regarding the concrete exam fields and other issues.

3.4 Common Features and Differences

The majority of initiatives – whether institutional, regional or federal – share the feature that they proceed from the assumption that additive acquisition of knowledge or additional exams are required in order to be able to participate successfully in HE-based education programmes – at least in the currently implemented form. Exceptions are individual regional initiatives for the recognition of upper-secondary VET qualifications such as the master craftsperson exam (*Meisterprüfung*).

Almost all of the identified initiatives share the characteristic that they do not enjoy widespread public awareness but lead to rather modest actual transitions to *Fachhochschule* or university-type establishments. One relevant exception are the Austrian VET colleges (*berufsbildende höhere Schulen*). It would be worth conducting further studies about in how far the potential transfer option to HE provision would be of increased interest at all, for whatever reason, for the large majority of graduates of VET programmes.

The qualifications to be acquired can be roughly divided into *Fachhochschule* and university-type access qualifications and are provided very differently in the three countries. As a broad tendency, Austria implements general HE access, Switzerland a two-tier principle of *Fachhochschule* and university-type qualification, and Germany increasingly pursues efforts of making upper-secondary VET qualifications usable as an entry prerequisite.

It is also conspicuous that, despite the basically federal structure of all three countries, concepts are implemented in Germany mainly regionally and in a different way, despite given framework regulations, whereas Switzerland and Austria work with federal legislative regulations, which clearly enhances transparency.

Only in Switzerland is there privileged access for VET graduates to *Fachhochschule* programmes. Elsewhere, general-education qualifications of the upper-secondary level suffice in most cases to take up pre-professional or VET HE studies.

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Chapter 4
Plural Administration in Dual Systems in Selected European Countries

Felix Rauner, Wolfgang Wittig, and Ludger Deitmer

4.1 Introduction

The topic of the present chapter is a comparison and evaluation of the dual systems of vocational education and training in Austria, Denmark, Germany and Switzerland with a view to identifying strengths and weaknesses. This comparison is based on desk research and a qualitative evaluation tool for expert workshops. The study was carried out with the aim to assess the performance of the German VET system in an international perspective with a particular emphasis on the optimisation of administrative structures. It is these governance and support structures that have a crucial influence on the quality of VET systems.

Dual vocational education and training is often perceived as a particularity of the German education system. It is a feature that is rooted in the German industrial culture and contributes to the competitiveness of the national economy. At the same time this alleged particularity seems to be the reason for the relatively low acceptance of dual apprenticeship training in the international context. This, however, is a misconception which is based on a somewhat fuzzy terminology in the discourse on vocational education and training.

If vocational education and training is understood as the qualification of skilled workers, then the aim of VET is to impart vocational competence (i.e. the competence to act professionally) to the trainees. The acquisition of vocational competence (professionalism) requires reflected working experience, which is the crucial point of vocational learning and development processes. Professional working experience alone is insufficient, as is the impartation of subject-specific theoretical knowledge. The latter does not lead to practical competence. Therefore the *combination* of professional working experience and the acquisition of related theoretical knowledge is fundamental for vocational education and training. This means that each occupation, be it mathematician, medical doctor or bank clerk, must ultimately be learned

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on the job as well. The dual organisation of vocational education and training is therefore no special type of vocational education, but its constitutive feature.

Two types of dual vocational education and training can be distinguished: (1) the one-phase or integrated duality and (2) the two-phase or alternating duality. Higher vocational education at universities is typically organised according to the two-phase model. A study programme relevant for the chosen occupation is followed, after graduation, by a phase of practical training on the job, e.g. by means of a preparatory service. In non-academic VET the two models compete with each other.

Given a differentiated understanding of duality one can observe that dual vocational education and training is by no means a German speciality, but the genuine form of vocational education and training, which is established in any place where prospective skilled workers are qualified for their tasks. The dual organisation of vocational education for non-academic occupations presupposes a plural administration, the quality of which varies considerably from country to country.

4.2 Research Problem

Systems of vocational education and training may be classified according to various sets of criteria depending on the perspectives of different research disciplines. Whereas in vocational pedagogy there is usually a classification according to the learning venues – a typical example is the distinction of "company-based" and "school-based" types of vocational training, which may be supplemented by the identification of mixed types of collaborative training –, the economic and social sciences tend to favour a classification according to the patterns by which processes of vocational education are controlled. This is the perspective of the coordination of agents from society and politics and the accommodation of interdependence between them, which has received increasing attention over the past two decades under the heading of "governance". The reason is that traditional approaches to collective agency such as hierarchy or the market were found insufficient for the explanation of a number of phenomena (see Benz et al., 2007). It is the intention of the present chapter to investigate the performance of these governance structures in the domain of vocational education and training.

In vocational education and training, three ideal types of regulation and governance are usually distinguished on the basis of the roles of the agents and the underlying rationale of agency. The dominant influence may come either from the state, the market or professional groups. On the basis of the categories of social regulation that have been commonplace in sociology since the time of Max Weber – tradition, market and bureaucratic rationality – the prevalent typology in the social sciences distinguishes three models of governance, which can be termed market-driven, state-controlled and occupation-driven or corporatist VET governance (see Greinert, 1998, pp. 19–22; Clematide et al., 2005, pp. 3–4).

The market-driven model of VET governance is characterised by the immediate control of vocational qualification by the employment system and the demand on the labour market. Vocational qualification is oriented towards the requirements of

employers and takes place on the job and in a private sector of training providers offering job-related learning modules. The responsibility for the training process rests with the learners, who are expected to acquire the qualifications required by employers on their own. Typical examples of this model are the United States and Japan, where the relative absence of a regulated VET system is associated with a large number of students attending upper secondary schools and higher education. In this system VET as well as the access to VET are controlled by employers as "customers", whose needs and demands determine the contents of training so that the transfer of qualifications from one company to another is difficult (cf. Greinert, 1998, pp. 20–21). On the one hand this system is regarded as quite flexible and adapted to the needs of the employment system, on the other hand the dependence on the private supply of training opportunities and the risk of underinvestment in vocational education are seen as serious flaws of this model (cf. Clematide et al., 2005, p. 3).

The state-controlled model of VET is characterised by a dominance of school-based vocational education, which is subject to a relatively tight regulation by state authorities. In this model, which is prevalent, for instance, in France or China, the regulation is based on the school's logic of action and includes a focus on civic education. Enterprises do not have an institutionalised role in this system, but serve as suppliers of internships while all regulatory functions – planning, management and control – are concentrated in the public sector. The contents of vocational education are typically based on theoretical and academic types of education (cf. Greinert, 1998, pp. 21–22). Due to the integration into the state-controlled education system there is a relatively close connection to general education. Moreover, the supply of training opportunities is independent of the provision of training places by private companies. The major difficulty of this system is the weak linkage to the labour market (cf. Clematide et al., 2005, p. 3).

The third model is usually referred to as traditional occupation-based or corporatist regulation (cf. Greinert, 1998, pp. 19–20). Historically this model is derived from the apprenticeship tradition in the craft trades. It is characterised by a strong influence of the training companies and the chambers (i.e. the corporate bodies or associations that represent the business community at the local or regional level). This concerns the access to training as well as the definition of training contents and the responsibility for examinations. Today occupation-based regulation is part of "mixed" systems of cooperative governance in which the regulation of vocational education takes place in a plural network of state bodies, enterprises or employers' associations as well as trade unions or professional associations. Variations of these mixed models of regulations can be found in systems of cooperative (dual or alternating) VET as they exist in Austria, Denmark, Germany and Switzerland.

In practice the most important examples of these mixed VET systems are the models of alternance and dual apprenticeship training. The common feature of these models is the combination of in-company training and school instruction. In the case of alternating training the phases of school instruction and practical training alternate in relatively long periods, and the vocational school or college remains the dominant learning venue. Curricula are usually fixed by state authorities, and despite the involvement of enterprises the state has a dominating role in this model.

The situation is somewhat different in the model of dual apprenticeship training. This model is characterised by the fact that the vocational education and training system is composed of two independent but interrelated subsystems, namely, an in-company training sector organised by private enterprises and a corresponding sector of vocational school instruction for which the state is responsible (cf. Greinert, 1998, pp. 23–24). Although this model appears at first glance as a combination of market and state regulation, there are also considerable elements of occupation-based and corporatist governance. In Germany, for instance, the traditional strong role of the occupational principle (*Berufsprinzip*) entails a control of the access to vocational training by the occupational groups concerned. Following the tradition of the guilds, they participate in the formulation of training curricula and influence the organisation of vocational examinations through the chambers, which are the bodies that officially represent the companies.

In what follows we will discuss the problem how the systems of dual or alternating apprenticeship training in Austria, Denmark, Germany and Switzerland can be characterised and situated with regard to their governance structures, and how this affects the performance of the systems. The epistemic interest is to identify examples of good practice in plural administration that can serve as a basis for policy recommendations.

4.3 Methodology

Plural governance systems in which state-controlled and market-driven or corporatist types of governance overlap can be classified on the basis of two dimensions of the governance process. The first dimension is the degree of coordination between the different agents with their respective internal logic or, to put it differently, the integration of the system. At one end of the scale the "plural administration" may be completely fragmented. In this case the public and private or corporative agents act autonomously within the legal framework and follow their own internal logic of agency without coordinating their activities. Each class of agents fulfils the tasks assigned to them in the context of the VET system independently. The responsibilities are not allocated according to functions, but according to subjects and domains, which means that the administrative functions of rule-making, execution and monitoring are dispersed across all types of bodies in varying constellations.

The second dimension is the aspect of the core principle that underlies the behaviour of the different agents and thus shapes the governance process. It is common in public management to distinguish between an input-oriented type of management by rules and resources, and an output-oriented management by means of the products and services to be achieved by the management process (cf. Jann, 2001; Stöbe-Blossey, 2001). Input control is typical of the traditional bureaucratic model of public administration, which is primarily concerned with the implementation of the law. Output control, on the other hand, is one of the cornerstones of the New Public Management approach, which claims to improve the efficiency of the public sector by means of management techniques adapted from the private business sector (cf. Osborne and Gaebler, 1993; Spicer, 2004).

From an ethical point of view the classical input orientation is an expression of a deontological conception, of which the most important example is Kant's theory of ethics, whereas output orientation is based on a teleological point of view, which is rooted in pre-modern conceptions like Aristotelianism. To put it differently, input control is equivalent to the orientation and evaluation of one's activities according to universal principles or norms that take primacy over the specific goals of a particular action, whereas output control means that actions are judged according to their contribution to the fulfilment of the objective in question. Taking into consideration the fundamental concerns that a consequentialist ethic almost inevitably evokes because an exclusive orientation towards ends always lacks the impartiality that is necessary for the morality of actions, one can assume that an output-oriented type of management cannot replace, but only supplement a management by rules.

These two dimensions allow for the construction of a coordinate system whose four quadrants represent the different types of plural corporatist governance system in vocational education and training. In the case of a *fragmented input control* the management processes follow the paradigm of the implementation of norms as expressed in the principle of the rule of law. The responsibilities are dispersed among different institutions or sub-systems of the political system. This includes rule-making as well, which is carried out by different bodies for their respective domains. The distinctive feature of fragmentation is that competences are allocated according to policy areas and that a vertical integration takes place at best within these areas. The result is that the institutions operate relatively independently of each other and have few incentives to coordinate their actions. A *coordinated input control*, on the contrary, is also characterised by a primacy of rules, but institutional arrangements such as the concentration of legislative powers and a consistent responsibility of government departments allow for a coordination of the bodies involved. Coordinated input control therefore features a more systematic structure of the legal framework and a consistent and coordinated implementation of the rules. The third model is *fragmented output control*, which combines a highly decentralised set of administrative bodies with a management by objectives. As this type of management automatically entails a relatively high autonomy on the part of institutions, the integration of the system as a whole can be secured only by means of a coordinated or centralised definition of the objectives in question. In the absence of such a centralisation or coordination there is the risk of the ultimate disintegration of the VET system and its replacement with a market of qualifications. Accordingly, the fourth model, which can be termed *coordinated output control*, aims to secure the integration of the system by coherent objectives, which are formulated by a central body or developed jointly by the bodies involved. The following table summarises this conceptual framework (Table 4.1):

Table 4.1 Types of governance in vocational education and training

	Integration of the system	
Rationale of agency	Low	High
Input	Fragmented output control	Coordinated output control
Output	Fragmented input control	Coordinated input control

The classification of existing VET systems according to the taxonomy described above allows for the development of policy recommendations if a type of governance can be identified that can reasonably be considered the optimum for dual or alternating vocational education and training. Governance within the public sector faces the problem that a simple adaptation of evaluative criteria that were originally developed for the private business sector is not possible. The reason is the difference between the internal logic of the economic system on the one hand and the state or public sector on the other. Whilst business firms in a market economy operate within a fixed system of objectives with the supreme goal of profit maximisation, this fixed system of goals is alien to political (sub-) systems – at least from the standard liberal perspective of an open society with democratic institutions and procedures. The only exception are communitarian models, which view politics as the pursuit of a shared conception of the good life and accordingly assign to public institutions not only procedural, but also substantive functions. As already stated above, this teleological interpretation of policy making is inadequate under the conditions of modern societies since it cannot satisfy the legitimate demand for impartiality and therefore needs at least to be complemented by procedural norms.

One example of a position that views governance in the public sector as a process exclusively oriented towards efficiency and performance is the New Public Management approach, which is characterised by a technocratic concept of governance and an instrumentalist view of the state (cf. Spicer, 2004, 2007). This view misconceives the specific character of *political* governance and supports a model of collective decision-making that ultimately lacks democratic legitimacy. Spicer (2004) criticizes this model as 'teleocratic'. The factors neglected in this model are the openness of societal and political goals and the diversity of interests that needs to be accommodated by deliberative institutions and procedures. This also has consequences for the scientific analysis of the phenomenon of public policy. An economic or managerial approach can only be supplementary, and a purely technical concept of governance has to be avoided in order to maintain the necessary room for manoeuvre with regard to negotiations and compromise. It must be observed that coordination between the agents is not good by itself, but only if it is based on deliberation and the autonomy of agents. Notwithstanding the sound objections to the low efficiency of traditional input control and the fragmentation of competences one cannot simply conclude that the opposite model of coordinated output control must be the optimum.

Accordingly the approach of the New Public Management, which is purely output oriented, is no adequate way of evaluating the quality of governance structures in VET with the aim to define an optimal state of affairs. An alternative approach that pays more attention to the special character of the political process has been discussed under the heading of 'public value' since the 1990s (cf. Smith, 2004). This approach is based on the idea that public accountability can increase the efficiency of state institutions. The difference from New Public Management is that the 'value' of public services is not defined by reference to a given set of preferences in combination with a monetary performance criterion, but established by public deliberation. The core idea is to combine democratic legitimacy and economic efficiency.

The term 'public value' can be defined as the value for the community generated by public services and management activities. This value is defined by the preferences of the citizens as established in collective decision-making procedures and quantified by the difference between the benefit for the public and the necessary costs (cf. Kelly et al., 2002, p. 4).

The concept of public value leads to somewhat different interpretations of the various dimensions of public management (cf. Smith, 2004, p. 77). This starts initially with the conception of *public interest*, which is neither an aggregation of individual preferences as in the market model nor defined unilaterally by politicians or experts as in traditional public administration. Instead, the goals to be pursued are the topic of public deliberation, in which individual and collective preferences are shaped by argumentation. Accordingly the *performance objectives* are complex as well; besides the provision of service outputs they may include the satisfaction of citizens/customers, the assurance of the desired societal outcome, and the maintenance of trust and legitimacy. There is a *multiple accountability* to the public as people are addressed as citizens, customers and taxpayers. This distinguishes the Public Value approach from New Public Management where accountability is established hierarchically through performance contracts and sometimes through market mechanisms. A crucial part is played by *public participation*, which extends beyond elections in the traditional bureaucratic model or customer satisfaction surveys in the managerial model and requires public deliberation about policy objectives. Finally the *role of managers* has to be considered. Their role is not just to respond to political direction or to meet agreed performance targets, but to respond to the preferences of citizens and to renew trust through guaranteeing quality services.

It can be expected that the 'public value' model of plural and deliberative governance is a promising alternative to state-controlled or market-driven types of public policy. The integration of different stakeholders into complex decision-making processes is discussed in public policy research under the concept of *governance network*, which can be regarded as a particular way of implementing plural administration. The current debates on the democratic anchorage of governance networks (for a summary, see Sørensen, 2005) show that the measures that may be taken for this purpose correspond to relevant elements of the public value approach and are capable of promoting the implementation of the latter. The ideas of public deliberation, multiple accountability, publicity and the continuous renewal of legitimacy are taken up in these democratization strategies. The following measures can be considered for the democratic anchorage of governance networks: adequate control of networks by democratically elected politicians, adequate representation of relevant stakeholders through the organisations and institutions in the network, adequate means for the citizenry to contest political decisions, and observation of democratic rules and norms that allow for inclusive and deliberative decision-making (cf. Sørensen, 2005, pp. 353 f.). What is emphasised by these characteristics is that public management within a network – and the VET system may well be considered a network due to its plural structure – must be based on objectives defined by public deliberation as well as on norms and thus combine input and output control if it is to meet the requirements of democratic instead of merely efficient governance. A

governance model for the VET system that is optimal in this sense should therefore include a high degree of coordination between the bodies involved and should combine elements of input orientation like participation and deliberation with elements of output orientation such as performance orientation, efficiency and quality assurance.

This model is operationalized by an evaluation tool with several indicators that are listed below. In addition to desk research carried out on the basis of the theoretical framework the set of criteria opens the opportunity to carry out expert interviews with a view to situating the different VET systems within the coordinate system described above. There are seven main criteria, of which five relate to the integration of the system (i.e. coordination and fragmentation) and two to the dimension of input and output orientation. These main criteria are the following:

- Dimension 1: Integration of the system
  - Category 1: Consistent legal framework
  - Category 2: Cooperation of the various bodies
  - Category 3: Innovation strategies
  - Category 4: Balance of relevant policy areas
  - Category 5: Allocation of strategic and operational functions
- Dimension 2: Input and output orientation
  - Category 6: Outcome orientation
  - Category 7: Input orientation

These criteria are operationalized by approximately 30 sub-criteria or items that are evaluated and discussed by experts in the course of evaluation workshops. Respondents are asked to judge the items on a scale from 1 (= not realized) to 10 (= fully realized). The aggregated answers determine the position of the VET system within the matrix described above. The position on the horizontal axis 'integration of the system' is defined by the mean of the values for the main criteria 1–5 with increasing numerical values indicating a higher degree of coordination. As regards the second dimension, the value is calculated on the basis of the mean of the two remaining main criteria 6 and 7. Given that the two main criteria have a reciprocal relationship so that a system is situated halfway between the poles of input and output control if the two criteria are equally realized, the values are standardized before the mean is calculated. Therefore the value for the position on the vertical axis is calculated according to the following formula:

$$(n_{\text{Outcome}} + 11 - n_{\text{Input}})/2 \tag{4.1}$$

The value expresses which of the two modes of governance has a stronger influence on the VET system in question. The evaluation tool was applied in four expert workshops in Berlin, Copenhagen, Vienna and Zurich in November 2007.

4.4 Research Findings

The positioning of the four countries (Fig. 4.1) shows that in Germany the fragmentation of governance is particularly strong while in Denmark and in Switzerland there is a remarkable degree of coordination. With a score of 7.8 on the axis 'integration' and 2.8 on the 'input/output' axis, Denmark exemplifies the type of coordinated output control. For Germany (4.4; 6.3) the analysis shows a weak coordination and a clear dominance of input orientation. Austria (6.0; 5.4) shows a stronger, but still relatively weak coordination and a balanced ratio of input and output control. In Switzerland (7.0; 5.1) the coordination is already very strong and almost reaches the Danish figure. In addition, there is an almost equal distribution of input and output control, which suggests that the Swiss VET system comes closest to the ideal model of governance as discussed in the previous section.

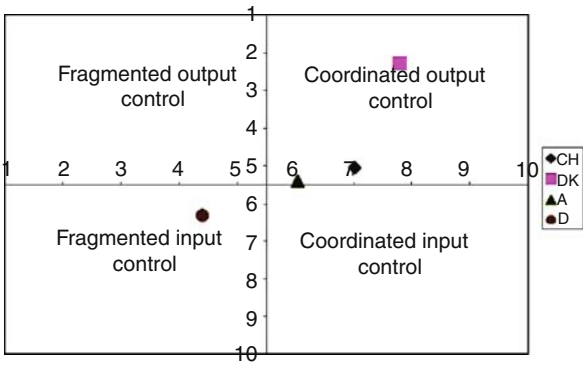

Fig. 4.1 Governance in dual VET systems in transnational comparison

It has to be emphasised also in the light of the previous desk research that Switzerland with its pronounced federalism and language pluralism has a well-developed and coordinated system of dual vocational education and training. The competences are allocated to the national, regional and local levels so as to ensure a good equilibrium of strategic and operational functions according to the principle of subsidiarity. The new Vocational Training Act that came into force in 2005 enacted a fundamental reform of the VET system, following a constitutional amendment in 1999 that concentrated the legislative power for the entire system of vocational education and training (except higher education) at the federal level (cf. Article 63 of the Swiss Constitution). The Swiss Federal Institute for Vocational Education and Technology (BBT) became the central institution for the coordination of the VET system. At the same time all stakeholders in vocational education contribute to the development in VET in accordance with the principle of subsidiarity.

After the reforms of the past decade Denmark can be regarded as an example of coordinated output-oriented governance. This is illustrated by the fact that the political responsibility is concentrated in one body. It is exclusively with the Ministry of Education, which also ensures the coordination of general and vocational education (see Cort, 2005, pp. 13–16). The ministry guarantees that VET programmes

comply with the guidelines of education policy. The ministry also supervises the vocational colleges that offer basic courses and main courses in vocational education and training. (The basic course is the introductory phase of a Danish VET programme, consisting of school-based instruction in vocational theory, whereas the main course is the phase of vocational specialisation by alternating training.) All strategic functions like the development of occupational profiles or the recognition of qualifications are located at the national level as an institutionalised cooperation of all stakeholders. This dialogue includes the Council on Initial Vocational Training as the main advisory body as well as twelve trade committees that collaborate in the preparation of framework curricula. At the local level, on the contrary, all operational functions are located, which also include the development of concrete school and training curricula as well as the outline of individual training plans. The main actors at this level are the vocational colleges, the training enterprises and the local VET committees (cf. Cort, 2005, pp. 16–18).

Moreover, the Danish system is characterised by a strong outcome orientation. This is shown, for instance, by the autonomy of the vocational colleges and the absence of detailed regulation from the national parliament. The colleges are independent public institutions with their own budgets and a performance-based funding scheme, which have the power to develop their own curricula and training plans within the national framework. This means that the process of curriculum development starts at the national level and is continued at the lower levels as a process of increasing differentiation and individualisation, which ultimately leads to the formulation of individual education and training plans for the trainees. However, this principle of individualisation has little effect in practice given that the local organisation of VET is still strongly influenced by the class structure of the colleges.

To some extent the German system can be regarded as the opposite model to the Danish system. A long tradition of decentralisation has led to a strongly fragmented governance system, as is already shown by the separation of the legislative powers for the two branches of vocational education and training. While the school part of dual apprenticeship training and the school-based VET programmes are under the responsibility of the states (*Länder*), the federal government is responsible for in-company training within dual VET. Finally, the domain of continuing vocational education and training is characterised by an uncoordinated variety of both federal and state regulations.

A distinctive feature of the German system is therefore the distribution of virtually identical functions across different levels of government. In addition there is a heterogeneous involvement of government departments as the ministries of education are responsible for vocational education whilst the supervision of in-company training is in most cases a task of the ministries of economics or labour.

Like Germany and Switzerland, Austria is characterised by strongly developed federal structures. However, contrary to Germany the responsibility for educational policy is concentrated at the federal level, and this applies also to vocational education. This allows for a better coordination of the system than in Germany. The implementation of VET is regulated at the state level, and the Federal Ministry of Education is the supervisory body for the entire education system. In recent years a number of reforms were implemented that followed the modern principles of

deregulation and decentralisation, but the dominant paradigm is still juridical and bureaucratic.

The two following charts summarise the means of the experts' assessments given in the evaluation workshops of the main criteria described above. As explained before, the participants evaluated the status quo in their countries for each item on a scale from 1 (not realized) to 10 (fully realized) (Figs. 4.2 and 4.3).

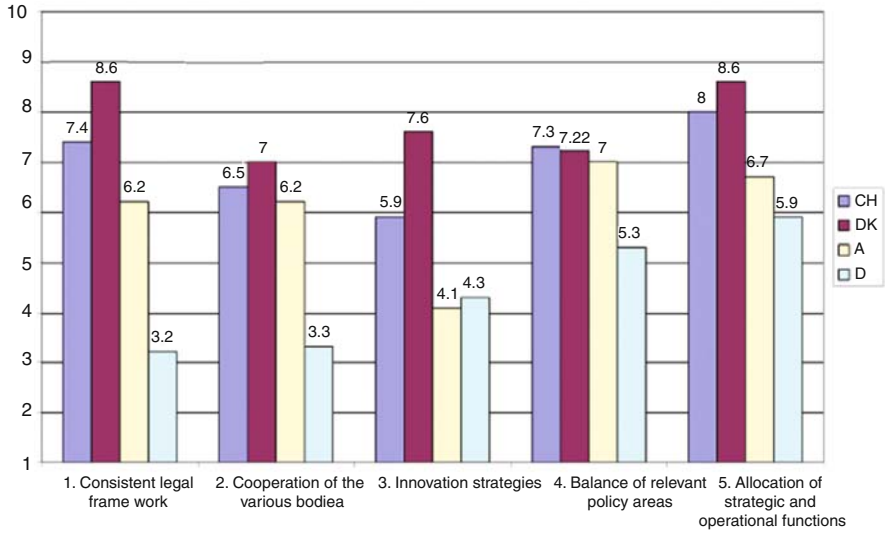

Fig. 4.2 Summary of results (means) of the expert evaluation on governance in dual vocational education in Austria, Denmark, Germany and Switzerland (integration of the system)

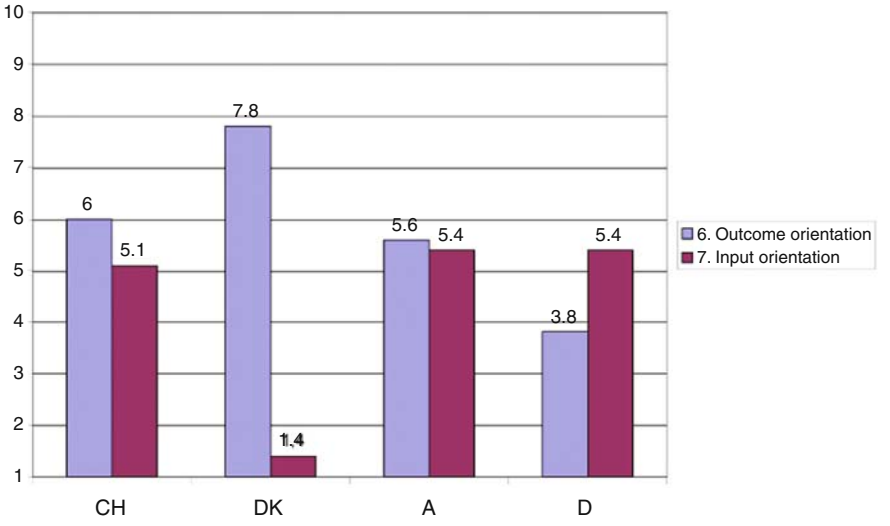

Fig. 4.3 Summary of results (means) of the expert evaluation on governance in dual vocational education in Austria, Denmark, Germany and Switzerland (input and output orientation)

4.5 Conclusions

This chapter has provided an overview of a theoretical framework by means of which several types of plural governance in dual or alternating vocational education and training can be identified. In addition to this classification scheme the public value approach was discussed as a yardstick for evaluating the performance of existing VET systems on the basis of their position within the coordinate system. It was argued that the theoretical optimum for governance in dual systems of vocational education and training was a type that combined a high degree of coordination between the bodies involved with a balanced ratio of input and output control, i.e. of management by rules and management by objectives.

The case studies and evaluation workshops in which this methodology was applied for the study of the dual training systems of Austria, Denmark, Germany and Switzerland came to the conclusion that the Swiss model most closely approached to the ideal model. One of the strengths of the Swiss system that were identified is the consistent legal framework for vocational education and training at the national level, which lays the foundations for an integrated governance system. This is complemented by the concentration of the supervisory functions in one national authority. The Federal Institute for Vocational Education and Technology serves as a link between the national government and the actors at the regional level. This centralisation of strategic functions also allows for a balance between the relevant policy areas, as is expressed by the high score of Switzerland for this item in the evaluation workshops. As regards the allocation of strategic and operative functions, the results suggest that the high autonomy of local bodies concerning the implementation of vocational training represents an advantage of the Danish and Swiss systems.

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Chapter 5
Creating the Social Foundations for Apprenticeship in Ireland

Barry Nyhan

5.1 Introduction: Apprenticeship

The advocates of work-based apprenticeships argue that learning through practice alongside and under the guidance of an expert practitioner is the most effective way, and perhaps a necessary one, to transmit professional expertise and skills from one generation to the next.[1] They also point out that the workplace provides a motivating 'active learning environment' for those young people who possess a more practical form of intelligence, which is different from but not inferior to a classical academic intelligence (see the work of Gardner (1983), on multiple forms of intelligence). Thus, they contest that, if more work-based apprenticeship opportunities existed, this could reduce the large number of young people with a 'practical form of intelligence' who do not perform well in traditional education and who leave school with a sense of failure. The learning motivational value of apprenticeships is also highlighted in that it liberates those young people from a school-learning environment that is perceived as passive and promoting dependency. An apprentice is taking up the role of a young adult worker moving towards independence as distinct from that of a dependent school-boy or girl. Proponents of apprenticeships also argue that they are more cost effective than formal education programmes in that as well as learning

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[1] The practice of apprenticeship has a long history with origins in the craft guild system of medieval times. This entailed young people being inducted into a guild of highly skilled and respected craftspeople (what Lave and Wenger (1991), would call a 'community of practice') to learn the practice of that guild through working closely with and learning from a master over a period of years. They learned skills but also standards of behaviour, values and the work ethic of the community they joined. On successful completion of the formation period and having made a 'profession' to respect the standards of their guild or community, apprentices were called to practice what became known as their 'profession' (the origin of the term 'profession' in the Latin languages) or 'vocation' (in the English language) or *Beruf* in the German language (which means 'one's calling', the equivalent of the English word 'vocation')

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new skills, the young worker-apprentices are also productive in contributing to the performance of their company (see also the Chapter 15 by Rauner and Heinemann, this volume).

Apprenticeships are very much part of the industrial cultural landscape of countries such as Germany, Austria, Switzerland[2] and Denmark but are not strong in countries such as France, Spain and Italy who tend to follow more school-based vocational education approaches. However, in recent years, on the basis of arguments put forward above, a number of countries with weak or discontinued apprenticeship traditions, such as Australia, the UK, France, Finland and the UK, are making efforts to introduce or revive apprenticeships (Ryan, 2000). Australia has made enormous strides in increasing the number of apprenticeship from 120,000 in 1995 to 400,000 in 2003 (see the Chapter 10 by Smith, this volume).

This paper presents the Irish apprenticeship story.[3] It shows that, despite Soskice's comment that Ireland was institutionally unsuited for apprenticeship, it did in fact create an industrial cultural climate of cooperation between the different institutional actors to provide the social foundations for a well-functioning apprenticeship programme (Soskice, 1993). The paper discusses how this new culture of cooperation, along continental 'social-partnership' lines, emerged in 1991 (Ryan, 2000) built on a long and painful period of institutional learning going back to the 1960s. In fact, the apprenticeship story can be seen as a microcosm of the wider economic and social development and transformation taking place in Ireland, giving rise to the vibrant Irish economy during the 1990s and early years of the millennium known as the Celtic Tiger.

Following this introductory section, Part Two briefly looks at earlier efforts from the 1960s onwards to introduce a well-functioning programme, which are seen as a learning period underpinning the breakthrough of the 1990s. Part Three presents and discusses the 1993 programme and the paper concludes with a number of reflections in Part Four.

5.2 Earlier Efforts to Build a National Apprenticeship System – Painful Learning Experiences

The apprenticeship tradition inherited by Ireland on gaining independence from Britain in 1922, was a voluntary and non-regulated one dependent on the backing of employers. Despite numerous initiatives at different times since independence by Irish policy makers to break with this tradition and create a regulated system, these

[2]In contrast to other OECD countries, government policy in Switzerland encourages young people to follow an apprenticeship rather than a third level university route. Thus only approximately 20 per cent of a cohort attends an upper secondary academic school.

[3]It should be pointed out that this paper is only discussing the statutory apprenticeships designated by the Irish Training and Employment Authority, FAS (see Table 5.1). It does not discuss other existing forms of apprenticeships dealing with sectors in areas such as Farming and Hotel and Tourism.

were hampered by a lack of agreement among the economic, social and educational actors about the path to be followed. Ryan comments on the length of time and political effort that 'it has taken for (Ireland's) culture to send economic policy in a different direction from that of the UK' (Ryan, 2000, p. 61).[4]

The Irish journey towards the establishment of a nationwide apprenticeship programme was a long and painful learning one, mirroring its attempts to introduce an industrial culture suited to its needs. Although government bodies, certain trade unions, and employers made efforts at various intervals to create a quality, regulated apprenticeship system, according to Ryan (2000) and Boyle (2005), up to the successful reform in 1993, apprenticeships in Ireland were haphazard, poorly monitored, and for the most part lacked employer support (see also European Social Fund Evaluation Unit, 1995).

However, the breakthrough that occurred in 1993 did not come exactly out of the blue. Boyle (2005) identifies the industrial and socio-economic development work of the 1960s as building the foundations for the today's successful programme. This period witnessed the adoption of active labour market policies with state involvement in training. Boyle (2005) sees this as the beginning of a period of learning by the Irish State from bodies such as the OECD. He mentions the influence of the Swedish Rehn-Meider model, in accordance with which the state takes a prominent role in promoting economic development through pursuing active labour policies.

During the 1960s, the Irish Government's view was that, because of lack of employer support for apprenticeships, it needed to step in. Thus, the Industrial Training Act passed in 1967 (which repealed the earlier Apprenticeship Act of 1959) gave rise to the Industrial Training Authority (AnCO) and later FAS, which took over the responsibilities of AnCO, when it was dissolved in 1984. While the regulation of apprenticeships formed a major part of this Act, it also espoused a more proactive and strategic active labour-market role for industrial training in economic and social development.[5]

The Apprenticeship Act had given AnCO the authority to designate apprenticeship trades in consultation with employer representative groups. It also gave AnCO the power to make apprenticeship rules in relation to: a company levy grant system to pay for training; entry requirements; forms of employment contract: the manner in which employers instruct apprentices; an apprentice record-keeping system covering their employment record and their off-the-job training and education.

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[4] In his comparative study on the economic development of Ireland and other small European states, in particular in the post World War 2 years, the Norwegian Mjoset (1992) comments that one of the causes of Ireland's weak system of economic innovation was its dependence on a British economy that was beginning to decline. Thus, while other small states in Europe such as Austria and Switzerland were free riders on Germany's economic miracle, Ireland was still embedded within the declining industrial economy of Britain (Mjoset, 1992, p. 9).

[5] In a heated debate in the Irish parliament (Dail) in 1966 about the rationale for the creation of AnCO, the Minister of Labour at the time argued that the 'availability of trained manpower will attract industry.' So in the context of an active labour-market strategy, training was geared towards job opportunities in the foreign companies in the process of being enticed by the Irish Industrial Development Authority to invest in Ireland (Boyle, 2005, p. 23).

However, although the 1967 legislation gave AnCO the power to compel employers to release apprentices for off-the-job learning, in practice 40 per cent of registered apprentices were not released. New proposals were made in a report – *Apprenticeship – A New Approach* in 1973 – which included recommendations that the length of apprenticeship be reduced from 5 to 3 years and that all apprentices spend their first year on off-the-job training.

The accession of Ireland to the European Union[6] in 1973 was a huge boost to the country, giving it a new sense of identity and broadening mentalities about industrial and social policies, in particular learning about how business can cooperate with trade unions in a spirit of social partnership in countries such as Germany and Denmark (see Prondzynski, 1992). The availability of EU European Social Fund (ESF) money was seen as the way to introduce the recommendations of the 1973 report, in particular that dealing with the provision of off-the-job training to apprentices on their first year. ESF funding was used to build a network of AnCO training centres throughout the country to provide a foundation first year off-the-job course to apprentices as well as to offer training to meet local labour needs and in particular to provide training for the unemployed. Funding was also used to cover the costs of apprentices' attendance at Institutes of Technology (education colleges, which were then called Regional Technological Colleges) for theoretical education courses to complement the practical training undertaken in the AnCO training centres.[7]

However, the provision of state (ESF) sponsored off-the-job training schemes run by AnCO was a mixed blessing in that it cut at the heart of the concept of apprenticeship which is fundamentally a work-based and work-situated learning programme sponsored and implemented by employers. Thus the availability of ESF money to fund AnCO off-the-job training only let employers off the hook. What is more it also led to the destruction of good schemes that existed in some companies as employers ceased to recruit apprentices and instead were happy to cherry-pick those who had been trained by AnCO (Boyle, 2005).

Furthermore, because AnCO had to design curricula for off-the-job training courses in its training centres, it found itself at a remove from classical apprenticeship learning which is on the job, experiential and for the most part informal and unstructured. In designing curricula based on 'systematic training principles' – based on the 'one-best way to learn' approach of behaviourist and programmed learning theorists such as Gagne (1965) and Mager (1975) – the rupture from classical holistic apprenticeship 'situated learning through working' was compounded.

This new dispensation also created friction between AnCO and the educational colleges, who had responsibility for off-the-job education. The latter saw the growth of modern, very well-equipped AnCO training centres, where apprentices spent their

[6]Then the European Economic Community.

[7]ESF funding was also used to finance targeted, short duration 'intermediate' third-level technological education courses at technician level in the Institutes of Technology found throughout the country (see Wickham and Boucher, 2004).

first full year, threatening their educational role. With their formalised training programmes in their newly equipped 'school-like' training centres, it was no wonder that AnCO training centres were seen to be replicating what the education system was doing.

Also, the competence of AnCO instructors who were highly qualified craftsmen (the majority of them male) with a long experience in industry but for the most part lacking a third-level education qualification was challenged by the education sector teacher trade unions. This led to fruitless arguments about the competence of AnCO instructors to talk about the theoretical concepts underlying the practical skills they were teaching. In the face of a rapidly expanding AnCO (which was an instrument of social policy, pursuing active labour-market policies, as distinct from pure educational ones) there were also contentious discussions about the role of AnCO as to whether it was only providing a stop-gap measure until education was given the resources to do what AnCO was doing. Thus instead of devoting its energies in pursuing its distinctive social intervention role, AnCO found itself defending its role.

During this time, the relationship between employers and trade unions with regard to apprenticeship was no better. The adversarial relations between them in relation to economic and employment policies, in a difficult period for the Irish economy, proved to be a road block in making progress on apprenticeship. In fact, in the joint industrial training committees, the issue of apprenticeship was often used as 'political football' in addressing other agendas. Also in the context of economic hardship, the training levy grant scheme proved to be contentious to employers.

But, more importantly, the oil crisis of 1973 played havoc with the Irish economy, ending the relative boom that began in the latter part of the 1960s, and ushering in a period of high unemployment with the consequent lack of demand for apprentices. The attempt by the Irish government during the 1970s and most of the 1980s to buy its way out of this situation through massive borrowing only made matters worse. A reversal in fortunes only came with the fiscal austerity measures that were underpinned by political and social partnership agreements in the late 1980s and early 1990s.

The end result was that the 1973 apprenticeship reforms were not implemented and according to the Irish ESF evaluation unit – '20 years of debate, controversy and dialogue passed before any substantial progress was made in relation to these reforms' (European Social Fund Evaluation Unit, 1995). Ryan sums up the situation – 'like its UK counterpart, Irish apprenticeship was in the 1980s an archaic, publicly unregulated and declining institution, restricted mostly to craft occupations in industry and construction, that certified apprentices according to time-served rather than vocational competence' (Ryan, 2000, p. 59).

However, the story was not so bleak, as beneath the surface, Irish economic and social actors were learning a new language of social partnership consensus, through exposure to different ways of managing social and economic policies as found in continental and Nordic EU countries, leading to a radical change in the Irish landscape in the early 1990s.

5.3 The Social Partnership Agreement – Basis for the Successful 1993 Apprenticeship Programme

The 1987 Programme for National Recovery was the occasion for a dramatic change in Ireland when the government and main parties in the Irish Parliament came to an historical consensus about dealing with the enormous national fiscal deficit. This ended a period of massive public borrowing and issued in a period of fiscal austerity. Trade unions took the courageous step to go along with the government's proposal through agreeing to collaborate with government and employers in a 'social partnership' coalition in devising and implementing a recovery programme.[8] Thus began the Irish 'social partnership' model for steering economic and social affairs that continues to this day and is seen by many people as the key to the emergence of the Irish Celtic Tiger.[9]

Boyle (2005, p. 32) states that 'the startling outbreak of social peace amongst employers and employees and the end to adversarial party politics' provided the context for a new powerful active labour market policy coalition of employers, trade unions and most political elites, leading to the introduction of reforms in many areas including apprenticeship. Thus, the first all embracing social partnership *Programme for Economic and Social Progress* (PESP), agreed in 1991, contained a commitment to introduce a new 'standards-based' apprenticeship programme.

The social partnership PESP agreement gave the 'political' imprimatur and backing that ultimately led to the successful implementation of the recommendations of a 1989 report on apprenticeship. This report was highly critical of the lack of employers' involvement in apprenticeship training. It criticized employers who it stated preferred to poach skilled workers from other companies or cherry pick those coming off the state sponsored (AnCO/FAS) first year off-the-job apprenticeship programme (Boyle, 2005, p. 24). Since the mid 1970s about a third of all apprentices starting annually undertook the first year of their off-the-job training in an AnCO/FAS training centre, which was funded through substantial support from the European Social Fund (ESF). Many of these apprentices did not have contracts with an employer. As mentioned earlier, the government felt that it was pushed into running the AnCO/FAS programme due to the reluctance of employers to train apprentices. As mentioned earlier, the availability of ESF funding was in fact a mixed blessing as it allowed the key apprenticeship players – employers – to exempt themselves from the process. The 1989 report stressed that this situation was totally unacceptable and that by its nature an apprenticeship programme must be sponsored by employers who are the main beneficiaries of the programme.

It made the following other recommendations:

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[8] According to Boyle (2005, p. 32), 'social partnership secured a corporatist bargain' that was the Irish equivalent of the Dutch 1982 Wassenaar or the Swedish 1938 Saltsjobaden accords.

[9] The former Prime Minister (Taoiseach) of Ireland, Bertie Ahern, who was actively involved in negotiating a number of social partnership agreements since 1991, stated many times that the major factor contributing to the success of the Celtic Tiger was 'social partnership'.

(a) apprenticeships should be 'standards based' with precise specifications of the competence levels to be attained and the curriculum to be followed for each craft, rather than a mere specification of length of time to be served (although it did propose that this should normally be 3 years);
(b) it be mandatory for all future craft workers to have a National Craft Certificate;
(c) there should be a good balance between 'on-the-job learning' and formalised 'off-the -job' education and training following a modular broad curriculum.

In relation to the governance of the apprenticeship programme, the report proposed that a National Advisory Apprenticeship Committee (NAAC) comprising employers, unions, government labour market bodies and education institutes be established to design and steer a new programme.

The new social-partnership climate and the improvement in the economy with the emerging Celtic Tiger in the beginning of the 1990s meant that these recommendations stood a good chance of being adopted. The PESP social partnership agreement in 1991 provided the impetus for action to be taken. A National Apprenticeship Advisory Committee (NAAC) was set up to act as a steering committee for the design and implementation of the initiative which included representatives of education, employers and unions. The NAAC made FAS responsible for drafting the implementation plan (Boyle, 2005, p. 48).

However, there were many obstacles to be overcome before agreement on the shape of the programme was reached. The employer and education wings in particular fought hard to gain leadership of the programme in accordance with their traditional positions. Basically, while employers supported a 'standards-based' apprenticeship system, they argued that the state should pay for it but that they (employers) were the best people to control it. The education wing fought for an education-driven curriculum arguing that their academic credentials (including teaching diplomas) and superior scientific and technological knowledge put them in the best position to lead the delivery of the programme if only they were provided with the resources that FAS was given. They pointed to vocational educational systems in countries such as France and Italy as a way to proceed. However, the Department of Enterprise and Employment argued successfully that education would 'over-academise' what was fundamentally a social labour market interventionist programme (Boyle, 2005, p. 49).

Boyle (2005, p. 49) ascribes a major role to the part played by the Department of Enterprise and Employment and its executive agency FAS in conjunction with the members of the active labour market coalition from different quarters, in winning the battle with employers and education to give the leadership role to FAS in the design and implementation of the programme. A key role was seen to have been played by the FAS board.

In the end the following was agreed:

(a) a standards-based programme was to be drawn up for each craft with the agreement of all the stakeholders, that would normally take 4 years (200 weeks) to complete;

(b) a National Craft Certificate became a compulsory requirement for recognition as a craftsperson;
(c) employers would effectively sponsor the programme: they were responsible for recruiting apprentices, giving them an employment contract, undertaking and monitoring on-the-job training and seeing the whole process through;
(d) educational bodies would have a major say in setting standards and would run the education block release;
(e) A seven phase modular curriculum with alternating on and off-the-job training was adopted: phase one lasting about 16 weeks took place in the employer's work place; 20 weeks was allocated for phase two consisting of off-the-job training in a FAS training centre; phases four and six, each lasting for a 10 weeks block took place in an educational institute (Institute of Technology); phases three, five and seven consisted of on-the-job training at the work place, assessed at regular intervals by FAS and lasting in total about 144 weeks. The 25 designated apprenticeships are outlined in the following table.

Table 5.1 The 25 craft trades designated by FAS

Aircraft mechanic	Metal fabricator
Agricultural mechanic	Motor mechanic
Bookbinder	Originator
Bricklayer/stonelayer	Painter/decorator
Cabinet maker	Plasterer
Carpenter/joiner	Plumber
Carton maker	Printer
Construction plant fitter	Refrigeration craftsman
Electrician	Sheet metalworker
Fitter	Tool maker
Floor/wall tiler	Vehicle body repairer
Heavy vehicle mechanic	Wood machinist
Instrumentation craftsman	

5.3.1 Successful Implementation of the Programme

Helped by the favourable economic condition in the early and mid 1990s, the programme took off with a bang in particular in the construction sector which traditionally had problems in implementing quality apprenticeship schemes. The programme attracted school leavers who had far higher qualifications that the minimum required with about 70 per cent of them having an upper secondary school (Leaving Certificate) academic qualification. The minimum entry qualification was a lower secondary school (Group Certificate) 'pass' (ordinary level) qualification.

In response to demand by employers, the number of registered apprentices grew from 10,000 in 1996 to 14,000 in 1997, 17,000 in 1998, 21,000 in 1999, 24,000 in 2000, 25,000 in 2001 and 26,000 in 2002 and 26,659 in 2003 (FAS, 2003). The breakdown in the five trade families which grouped together 25 designated trades are shown in Table 5.2.

Table 5.2 Number of apprentices by trade families in 2003

Trade family	Number of apprentices	Percentage
Printing	128	0.5
Electrical	7,993	30.0
Motor	3,060	11.5
Engineering	2,435	9.0
Construction*	13,043	49.0
TOTAL	26,659	100.0

*Furniture used to be a separate family, but since 2001 has been subsumed under construction.

About 10–15 per cent of a school leaver cohort follow a designated apprenticeship route (FAS, 2007, p. 17).

On successful completion of written and practical assessments for both on-the-job and off-the-job training, a National Craft Certificate is awarded by the Further Education and Training Awards Council (FETAC). This is at 'Level 6' (equivalent to an Advanced Certificate) in the Irish National Framework of Qualifications. (The next 'Level 7' covers Ordinary Level Bachelor Degrees, normally a university degree).

5.3.2 Evaluation

A follow up study of a sample of the 7,513 people[10] who started their apprenticeships in 1999 was undertaken in December 2006 and January 2007 (FAS, 2007). It was found that 74 per cent completed their apprenticeships. Ninety two per cent of them were working in the trade that they qualified in but only 50 per cent with the same employer. Over 40 per cent of the Construction craftspersons were self-employed or owned their own businesses. The average net income of the respondents surveyed was Euro 704 per week. Interestingly, just over half of those surveyed deemed it necessary to have a Craft Certificate to gain employment. This drops as low as 40 per cent for those in the Construction trades.

The level of satisfaction with all phases and aspects of the apprentice programme, without exception, was very high. Over half the respondents had no suggestion for improvement of the programme. The top suggestions among those who made one were to shorten the phases and to have more practical work and less theory. A further evaluation study of the construction sector undertaken by O'Connor (2005) found that 94 per cent of recent graduates in six construction trades investigated, expressed satisfaction with their apprenticeship programme.

[10]Almost 70 per cent of these had an upper secondary level (Leaving Certificate) qualification. Forty percent followed apprenticeships in Construction and 30 per cent in Electrical trades.

5.4 Concluding Reflections

While the modest 10 per cent participation of a school leaver cohort in the Irish apprenticeship programme is significantly lower than the German 60 per cent rate and the Danish and Austrian 40 per cent participation rates (Ryan, 2000), nevertheless the implementation of a well functioning, relatively low cost and employer sponsored system, with a high quality education input, is a significant achievement for Ireland. After decades of efforts by Irish labour market policy makers, a national regulated framework programme overseen by a coordination body comprising all the stakeholders, now exists. Three factors can be identified as contributing to the success of the programme.

The main one was the creation of a solid social infrastructure copperfastening the institutional cooperation between the principal actors – employers, trade unions, educational institutions (Institutes of Technology) and the main government labour market executive body, further Education and Training Awards Council (FETAC) and FAS (Training and Employment Authority) – in implementing the programme. Ryan (2000) states that this development moved Ireland away from a UK inherited approach towards a continental approach in three respects: 'the linkage of apprenticeship to the education system; the development of social partnerships for the design and administration of apprenticeship; and the adoption of a statutory framework to underpin the whole' (Ryan, 2000, p. 63). It was the wider national 'social partnership' *Programme for Economic and Social Progress* agreement of 1991 that provided the foundation for this new spirit of cooperation.

A source of this change can be traced to the institutional learning by Irish government labour market personnel, employer and trade union officials about continental social and economic policies, through participation in EU social dialogue and social fund policy making arenas following Ireland's entry to the EU in 1973. According to Prondzynski (1992) this learning led to a new 'social policy (in Ireland) in the context of what one may describe as a more "Germanic" system of industrial relations' (1992, p. 85).[11] The continental European Union language of 'social partnership' became part of Irish discourse. EU Social Fund and vocational education and training programmes were the source of a growing awareness of the strengths of social partnership steered training agendas including those dealing with apprenticeship.

The second success factor was the take off of the Irish economy in the 1990s creating favourable condition for the fast growth of apprenticeship places in industry. However, the fact that most of these were in the construction sector, which went through a boom in that decade, makes one concerned about the situation in 2008

[11] With regard to question of what kind of a economic model the Irish Celtic Tiger has followed in relation to the contrasting 'neo-liberal market' or 'coordinated market' driven archetypal models of Hall and Soskice (2001), Boyle (2005, p. 12) argues that instead of identifying paradoxes in the Irish industrial model, one should look at how different components of Irish society fit together in a unique way. Two concepts that might assist us in understanding the kind of reality Irish style social partnership has given rise to are that of 'competitive corporatism' and the 'flexible developmental state'.

with the significant downturn in that sector. The sustainability of the programme therefore is going to be severely challenged in the coming years in the context of the demise of Ireland's Celtic Tiger economy.

The third factor contributing to the success of the programme relates to the steering and management of the programme. Even when the blueprint was agreed, historical tensions between the institutional actors still had to be overcome. As the programme developed working relationships between the different actors improved enormously, although from an assessment perspective, disagreements between the 'educational' and 'vocational training' wings still exist about the value of on-the-job learning. In pushing the programme through its initial stages, the contribution of the government department dealing with labour-market policy and in particular its executive agency, FAS, was critical (Boyle, 2005). On the part of FAS, this entailed, firstly, liaising closely with employers to ensure that they follow through on their commitment to sponsor the programme and make the substantial financial contribution to match that of government, and secondly, negotiating with educational institutes about implementing their specific role (Boyle, 2005).

Two questions are raised in this concluding section in relation to future developments in the Irish apprenticeship programme. The first concerns the possibility and the desirability of expanding apprenticeship opportunities for many more people along the flexible lines of Australia, with its part-time and adult 'second-chance' opportunities (see the Chapter 10 by Smith, this volume). While the take-up of apprentices among academically well qualified applicants (with an upper-secondary school qualification) has raised the status of craft-level vocational careers in Ireland,[12] the down side of this is that the traditional non-academic and practical oriented applicants cannot find apprenticeships. When one considers this in the context of the significant number of young people who do not find themselves at home in an academic school environment, and who leave school without adequate qualifications, the expansion of apprenticeships with its non-scholastic form of 'learning by doing' is a way of addressing this issue. With the escalating increase in the costs of formal education for all, and in particular now in the context of a looming recession, with rapid growth in unemployment and cutbacks in the education budget, there is a strong argument for widening apprenticeships to address a much larger population target group. This group could include the estimated 20 per cent of young people who drop out of school without attaining a Leaving Certificate and also perhaps many of those estimated 30 per cent who drop out of third level courses in their first year.

Australia has come up with a myriad of apprenticeship pathways to provide non-school based qualification opportunities, for example part-time apprenticeships and retraining opportunities for those in their 20s and 30s or even older (see the Chapter 10by Smith, this volume). These apprenticeships cover a vast field of new occupations, much wider than the traditional ones currently regulated by FAS. They also

[12]Surprisingly this appears to be addressing the seemingly intractable problem of attaining parity of esteem between academic and vocational education qualifications.

follow a much more flexible regulatory framework. They are promoted and monitored by a variety of agencies such as government bodies, skill councils, trade union groups etc in a market that is characterised by Smith (see Chapter 10, this volume) as crowded and overlapping. However the main feature of these apprenticeships is that they are employer-based with apprentices recruited on a 'working-cum-learning' contract. The benefit for employers is that they have workers on a reduced apprentice wage. The benefit for apprentices is that they acquire a trade or profession at the end of their training period. Looking at the costs and benefits from an employer's point of view, Rauner and Heinemann (see Chapter 15 this volume) claim that on average apprentices indeed produce net returns to companies as they become productive workers after initial months of learning-on-the-job. This is based on a study of 100 companies in Germany who used a self-evaluation tool to assess the cost-effectiveness and the quality of apprenticeships. Were Ireland to pursue objectives similar to Australia, it could build on some current vocational education and training programmes such as the FAS Traineeship programme and the education Applied Vocational Leaving Certificate and Post Leaving Certificate courses.

Coming back to the FAS regulated apprentices discussed in this paper, the second question relates to the concern of some commentators about promoting and ensuring the quality of on-the-job learning, which is at the heart of apprenticeship. Ryan (2005) contends that the opacity of work based learning with its lack of structure is a problem. For O'Connor (2005), the lack of moderation of on the-job-training is the weakest link in the Irish apprenticeship system. It should be noted however that the apprentices who responded to the FAS survey (FAS, 2007) stated that they were very satisfied with their on-the-job training and also with the qualified supervisors who had responsibility for the on-the-job training. Without concrete evidence about the quality of the on-the-job training, it is impossible to know how to comment on the above divergent perceptions. One must avoid the mistake of trying to fix something which is not broken. Certainly, a major mistake would be the over regulation or bureaucratization of the on-the-job training which would have the effect of killing off the natural and unique personal training (mentoring) style of a workplace training supervisor. Furthermore, as alluded to above, formal educationalists and educational researchers/evaluators are uneasy about assessing experiential and non-formalised learning precisely because of its contextualized and intangible nature that is very different to the instructional teaching taking place in schools.

However, the above difficulties must not mean that one should not seek to devise a suitable non-bureaucratic and non-costly system to promote and monitor on-the-job training and learning processes. O'Connor (2005) proposes a role for FAS instructors in implementing this. However, work firstly needs to be done in drawing up and agreeing guidelines for such a system. Perhaps a look at the research undertaken on the concept of 'work-process knowledge' (which can be defined as 'the practical knowledge that one can only learn through participating in actual work processes') by Boreham et al. (2002; see also Fischer et al., 2004) could be a starting point in tackling this.

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Chapter 6
Italian Apprenticeship Reform: Impact from National and Regional Perspectives

Sandra D'Agostino, Elmo De Angelis, and Ludger Deitmer

6.1 Introduction

The European Union (EU) Member States are in the process of modernising their vocational education and training (VET) systems. EU policies emphasise that modernising VET systems contributes to European competitiveness by facilitating citizens to acquire up-to-date professional skills that lead to qualifications recognised on the European labour market. It is through developing innovative policies and programmes that the quality of vocational training improves in terms of content, methods and procedures. While modernisation processes in EU countries may emphasise different proprieties or follow different paths, the common goal is to address the learning needs of young people in line with requirements of the economy and society.

Italy has recently undertaken major reforms to develop a better qualified labour force. Drawing on European resources (e.g. the European Social Fund) the traditional apprenticeship system was reformed.[1] This paper discusses the impact of this reform. It outlines the movement from a mainly company-based model with little public support towards a more quality oriented model. It describes what is distinctive about the Italian model in comparison to other European countries, while acknowledging that many of the same questions are raised, such as measuring VET competences and fostering better cooperation between company trainers and VET teachers in the school system.

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[1] In the old system there was, for example, little support for training companies. In passing, it is noted that while Italy is one of the pioneers in guaranteeing workers the right to continuing education (the '150 hours' allowed to study any subject and historically used to certify or re-certify lowly qualified workers in the 1970s), at the same time it now has one of the lowest participation rates of adults in any form of structured learning, be it general or work-related learning (Dondi and Turrini, 2005). This shows the extent of the deeply rooted social and individual behaviours that need to be overcome.

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The paper discusses the effects of the reform on the Italian labour market and its relationship with the general education system. As Italian regions play a major role in VET, the effects of the reform at the regional level are also discussed. To illustrate this, exemplary cases covering the implementation of a more regulated apprenticeship model in the region of Marche are described. Overall, the impact of the reform in improving the quality of training and introducing new training processes in companies is discussed. Finally, the issue of the coherence of Italian developments with European policies and practices is outlined.

In conclusion, while it can be stated that the reform has stimulated movement in the Italian VET system that has been static for many years, many questions on the impact of this reform remain open. Therefore, this paper must be seen as an interim evaluation of the new system. A final appraisal of the new system awaits a great deal of further evaluation research which looks at the effects of the reform on students/trainees and companies along with the economy and society.

6.2 Italian Apprenticeship Reform

Through the introduction of an external course system the recently introduced apprenticeship model seeks to combat the relatively high unemployment of young people. The new model provides them with better theoretical and practical VET skills in different fields, thus providing them with opportunities for sustainable employment in industrial and craft/trade professions. As well as providing better access to external course training, the aim also is to make training at the workplace more profound and more focused on imparting professional knowledge. Equipping workers with targeted technical knowledge enables them to obtain better job security through meeting higher labour-market qualification requirements. But there is more than a human-development motive for this reform, as the more competitive international economy requires Italian workers to have stronger and multiple competences. A more competent workforce enables Italian industry to gain competitive advantage.

The old apprenticeship system was based merely on company-based internal training that lacked external support.[2] In accordance with the new apprenticeship contracts (which form the legal basis of the recent reform) apprentices participate in an alternance system, on the one hand working and learning in enterprises and on the other, attending a set of complementary training courses in regional training centres or accredited further training institutes. The new arrangements aim to improve the quality of training, addressing the individual needs of apprentices as well as the enterprises. The effects of this reform from a policy development and

[2]On top of this weakness, the duration of apprenticeships was far too long: e.g. 5 years of training for electronic company apprentices and 6 years for heating ventilation and air conditioning apprentices.

change perspective are outlined below. The views of the participating companies are also outlined.

6.3 Relationship with Education and Labour Market System

The Italian apprenticeship system is mainly a labour-market instrument to: (a) improve employability; (b) ensure a smoother transition from school to working life; and (c) promote a better match between labour demand and supply. The Italian education system (including vocational education which is to be distinguished form vocational training) is highly centralised and regulated by the ministry of education. However, the vocational training system is decentralised to the 20 Regions (and the two Autonomous Provinces of Trento and Bolzano) and steered by regional labour market authorities (Dondi and Turrini, 2005). This provides a contrast to apprenticeship systems in other countries in Europe where VET systems are more closely linked to the education systems.

In 2006, there were about 590.000 apprentices in Italy. By 2007 that number had increased to 640.000. This corresponds to about 15–16 per cent of the total 15–29 year-old labour-market population. Apprenticeship is one of the main contractual pathways for recruiting young people into companies. On recruitment, apprentices enter into a 'training contract' which gives them the opportunity to acquire certified qualifications. The latter give them an entry card into other companies as well as access to further education.[3] The recruitment target group covered by Italian apprenticeships is wide, ranging from 16 to 29 years of age. This is important for determining the purpose of the training that is compulsory in an apprenticeship.

6.4 Political Reasons for Legislative Change

At the beginning of the 21st century, the government launched a strategy to boost growth and employment by 2010 in accordance with the Lisbon benchmarks. This focused on the link between economic development and employment growth. Italian employment rates were always lower than those of other large European countries and the EU average. In particular, youth unemployment was much higher than in other European Member States. New welfare state measures were urgently needed to facilitate a better transition from the education system to the labour market. The new apprenticeship model had as its main purpose the provision of a new labour market contract for young people.

The 2003 apprenticeship reform law laid down a new apprenticeship framework with the following targets:

[3]While the Apprenticeship pathway has some links with the educational system it cannot be considered – up to now, at least – as an integral part of the Italian education system.

- Delivering an apprenticeship programme, meeting quantitative and qualitative targets for young people who are obliged to undertake compulsory training up to the age of 18;
- Delivering an occupation oriented apprenticeship for young people through which they get qualified on the job and receive a certification following an examination;
- Delivering an apprenticeship which enables young people aged 18–29 years to proceed towards acquiring a secondary school diploma or a university degree;
- Widening the recruitment target population, to include young people up to the age of 29 and limiting the maximum duration of the apprenticeship contract to a maximum time of 6 years (within this time limit the duration of the apprenticeship contract for specific occupations is fixed by collective bargaining).

By law the new apprenticeship contract system answers the diversified needs of the labour market and the economy. The new contract covers three areas:

- Initial apprenticeship – the right to education and training;
- Enhancing the quality of apprenticeships, in particular work place and external training through which one acquires a professional qualification;
- Higher apprenticeships which enables one to proceed towards obtaining a diploma or a university degree.

These framework conditions provide the foundation for better quality training and education. They also provide for compulsory training in the enterprises. Furthermore, the framework conditions cater for the introduction of individual training plans for each apprentice drawn up by the enterprise.

6.5 New Governance Structures for National and Regional Authorities and the Role of the Social Partners

The apprenticeship regulation which deals with a labour contract and an educational and vocational policy tool requires collaboration between the Italian State and the Regional authorities. The 2003 reform recognised the role of the Regional Authorities for the first time by including a second level regulatory process in the implementation of the apprenticeship programme. However, before a regional law is passed, there must be agreement among the social partners at the lower local levels. Moreover, the salaries of the apprentices are fixed through collective bargaining among the social partners.

Thus, the legal framework of the apprenticeship contract entails collaboration and agreement at three levels:

- National government;
- Regional authorities; and
- Social partners.

At the local level the social partners are involved with the Regional Authorities in programming and evaluating the supply of vocational training for apprentices.

In order to take on an apprentice with a 'professionalizing' contract – the most widely used form of contract – two elements need to be in place:

- The National Labour Contract (CCNL) controls apprenticeships in the sectors, fixing duration, salary and the certification to be acquired;
- The regional regulations lay down the 'training profiles' for a specific sector – that is training goals and training content to be attained through formal and non-formal on-the-job training.

6.6 Age, Sectoral and Geographical Distribution

Since 2007, young people have been able to enter apprenticeship from the age of 16.[4] However, the percentage of young people under 18 is very low at under 10 per cent. This is a result of the reform process over the past 10 years that has raised the age at which people can enter an apprenticeship to 29 years. In fact, nowadays most of the apprentices are aged 20 and in the next years, with the full implementation of the 2003 reform, the average age will likely increase. The level of education for this target population is very low, with most of them having merely completed compulsory schooling without acquiring an upper education certificate.

Regarding distribution among the economic sectors, contracts in the agriculture sector are very rare. Although the handicraft sector has always been the main one for apprentices, its role has decreased in the last years. Numbers in the tertiary sector have almost doubled since 1997 and now its percentage of apprentices is similar to the handicraft sector.

The distribution of apprentices throughout the country shows substantial differences between the main geographic areas, with most of them concentrated in the northern part of the country.

Apprenticeships are defined by law in terms of a training contract. The volume and the objectives of the training vary according to different apprenticeship typologies. Usually a minimum amount of vocational training has to be provided, expressed in terms of a number of hours a year that is fixed in national law. Regional authorities and the social partners can increase this amount to address the competences to be acquired in specific situations. Traditionally, similar to other European systems of apprenticeship the provision of training is the task of the different national institutions. Regarding constitutional competence on vocational training in Italy, it is the task of the Regional authorities to set vocational training programmes. Those courses are publicly funded and are usually provided by training centres accredited at the local level. Under the 2003 reform enterprises that fulfil specific requirements can provide vocational training.

[4]Formerly the age was 15.

The objective of an apprenticeship can be a vocational qualification or a competence certification. Both refer to a 'training profile' that outlines the standards to be attained.[5] Training profiles are defined at the regional level and included in a Catalogue (Repertoire). Usually in-company training is organised and developed by an instructor (called 'enterprise tutor'), who can be the SMEs employer or a qualified employee with at least 3 years professional experience.

6.7 Input to the Labour Market

Participation in the education system shows a positive trend from 2000 onwards. The percentage of young people who stay in upper secondary schools receiving a diploma has been increasing constantly in the last decade, positively influencing the education attainment levels of the 20–24 years old population. At the same time the number of early school leavers has continuously decreased in particular during the last 5 years.

On the side of the labour market, the flexibility introduced through reform of labour contracts has raised the employment rate. In 2006 the number of employees reached 23 million, a two per cent increase on the previous year. The unemployment rate has decreased from 10.1 per cent in 2000 to 6.8 per cent in 2006. This is the best result of the last 20 years. These results indicate that the labour market strategy implemented since 2000 has worked well. However the trend in taking up apprenticeships has been very different to the general employment trend. The continuous increase in the number of apprentices employed relates not so much to a growth in employment but to other influencing factors. For example, the 2004 increase in the number of apprentices is a result of the cancellation in 2003 of subsidised labour contracts for young people. When one takes into account the very positive trend on the total labour market and the widening of the apprenticeship target group to 29 years, the low growth in 2005 and 2006 demonstrates a difficulty in the development of apprenticeship labour contracts. In 2007, however, a lower decrease in the unemployment rate corresponds to a major increase in the number of apprentices employed.

According to the experts, the decrease in the rate of growth in the number of apprentices over the last years is due to problems arising from the implementation of the 2003 reform. Cooperation between the different institutions and the social partners has not worked very well, producing an overlap of regulations. The heterogeneity of the local apprenticeship systems and uncertainty of enterprises about the systems are also issues. Perhaps those problems are a result of the lack of clarity about the distribution of competences between the national and regional

[5] So far, an Italian National Qualification Framework does not exist, it is under construction in accordance with the European Qualification Framework principles.

authorities. Certainly, a more cooperative way of proceeding between the national, regional and social partnership levels is required. In July 2007 an agreement between the Government and the social partners, translated in law on last December 2007 (act nr 247), stated that there will be a new reform of apprenticeships during 2008.

As well as addressing the problems related to cooperation between the different actors of the apprenticeship system, there is a need to increase the participation of apprentices in 'formal' vocational training provided in training centres or enterprises. The participation rate is too low and does not address the rights of all apprentices to receive formal vocational training. Finally there is the need to improve the quality of the vocational training system by setting national standards regarding content and output and in particular procedures to assess output. The overriding reason for reforming apprenticeships and implementing them effectively is to make them more beneficial to companies in improving their human resources and to help young people make the transition to the labour market.

6.8 Regional VET Systems: Diversity as a Laboratory for Testing Different Approaches

The 20 Italian regions have legislative power in the field of vocational training and use it to shape very diverse regional VET systems. Some regions follow clear policy directives and planning principles, while others just give a policy orientation and leave in up to the vocational training stakeholders to deliver the desired outcomes. These circumstances make it difficult to draw a coherent picture of regional VET policies. The governance of regional VET policies can be characterised as diverse. Overall, the different regional systems can be seen as laboratories to try out different concepts according to regional conditions and the needs of social partners.

Some regions follow the policy of public provision of VET, while others have reduced public provision while others still are experimenting with 'training vouchers'. A number of regions rely on a well established group of national training organizations. Others delegate their policy role to the Social Partners and limit themselves to distributing funds to accredited training organizations. Therefore one can see a complex picture of divergent approaches.

Some experts say that the reform of the Italian VET system might even produce a stronger differentiation in VET policy reform approaches (Dondi and Turrini, 2005). Up to the present, these approaches lack evaluation and impact studies that could provide an understanding of the effects of the reforms on companies, on learning processes and on whether the supply of workers is being provided adequately in terms of quantity and quality. In the next section we look in more detail at the measures of one province in the region of Marche – the province of Pesaro and Urbino – to see how the adopted measures are working.

6.9 Apprenticeship Training in the Province of Pesaro and Urbino

Since the late 1990s, registered apprenticeship contracts have grown in the Marche Region from 17,106 in 1998 – when the first reform was implemented – to 31,120 in 2006. Having addressed the obligation to provide external training for all apprentices since 1998, an evaluation report in that year provided valuable information for the local authorities about the effectiveness of the organisational processes and working methods.

The identified weak points emerging form this evaluation report are as follows:

- Lack of knowledge by the companies about the new training system which includes an external training provision;
- Heterogeneous background of the apprenticeship groups regarding age, previous education and work experience, makes it difficult to identify common training needs, and design and provide effective courses;
- Difficulties among some employers in balancing their production needs with the implementation of their planned training agenda;
- Difficulties of apprentices who left school early to join the workforce as new learners;
- Travel difficulties of apprentices due to the long distance between their homes and work locations;
- Questions about the performance of the external training company instructor who has a strategic role in making the link between the external formal training and on-the-job learning in the workplace.

On the basis of these findings the Province of Pesaro and Urbino initiated new training activities for apprentices and company tutors (see De Angelis and Deitmer, 2006). Table 6.1 outlines the activities that took place.

The new training activities provided practical opportunities to test new management and organisational methods to meet the needs of apprentices and companies. The purpose of these activities was to devise a new model to meet the needs of apprentices based on creating a network of actors with a stake in apprenticeship who would commit themselves to develop a shared vision and cooperate fully with each other.

Table 6.1 New training activities for apprentices and company tutors

Year	Number of courses delivered for apprentices	Number of courses delivered for company tutors	Total Number of students and tutors trained
2000	70	40	1,140
2002	30	30	
2004–2005	125		1,800
2005–2006	130		2,000

The main features of this intervention plan were as follows:

- Provision of modular training courses based on defined and achievable objectives ('a catalogue of modular training');
- Integration of formal and informal training for both trainers and tutors in the company;
- Information and dissemination activities to take place throughout the province;
- Permanent updating of a data base covering apprentices and company tutors;
- Training and development for company tutors lasting 12 hours;
- Support systems for all training activities;
- Training agreement between apprentices, training organisations and companies;
- Development of profiled training modules (a personalised training course for each apprentice);
- Flexibility regarding attendance at external training courses.

The working model outlined above can be described as a sort of 'dashboard' for decision makers, to constantly tune up and make apprenticeship training more effective in the Province of Pesaro and Urbino.

This training model does not obviate the need for continuous evaluation of all aspects of the apprenticeship training programme. In particular the following key aspects need to be evaluated:

- How apprenticeship training fits in with planning activities in the province including developments within the sectors;
- Promotion of organisational innovation (including management training) to further the quality of apprenticeship training within companies;
- Improvement of the thematic focus of external training courses and didactical methods used by the course lecturers;
- Cooperation and interaction between company trainers and external training lecturers to link the content of training and enhance work based learning;
- How to assist the apprentices to travel between their work places and external training sites;
- Continuously improving the professional development (competence development) of apprentices within their sectors.

6.10 Company Case Studies

To produce company case studies, owners of several small- and medium-sized companies (SMEs) were interviewed in 2006.[6] Two of these company cases in the areas of textiles and electronic devices are illustrated here.

[6]The SMEs covered sectors such as textiles, plumbing and related building works and high tech and electronic devices.

6.10.1 First Case: Company Producing Textiles

This company is a supplier of high quality textiles to a large fashion company. The company employs 15 people of which two are apprentices. One apprentice works in the area of pattern construction and the cutting process. The other works in the stock and product delivery department. The company manager's perception of the apprenticeship training was as follows: 'Apprentices work together with people who are doing the work. We provide trainees with people who can help them grow professionally. They learn to improve gradually with the help of experienced hands.'

The company seeks to train apprentices to be flexible by providing them with multiple skills. In general, the company finds it difficult to find persons from the local labour market who are qualified in areas such as pattern construction or textile production. Instead they look for young people who have a strong motivation to develop professional competence. Commitment is most important. According to the manager, 'if somebody appears not committed at the start, then we will not waste time training him.'

Apprentices learn under the auspices of a trainer, who is an experienced employee with long years working experience and has the capacity to introduce the apprentice into his working field. The manager stated that 'the core part of the learning takes place through the supervision of trainees by responsible, or rather experienced employees who have years of practical experience. These people know the whole business process very well and not just their own work areas. Anybody who wants to get ahead looks up to them and seeks to achieve their level of qualification.'

The apprentices receive external training/education in fields such as computer aided design (CAD) for tailors through a 120-hour supplementary training course system.[7] The company manager stated that: 'in our company there is no question of offering a CAD course in cutting. An external course for a number of apprentices from different companies with perhaps one from our company is the answer.' However the manager sees the core element of apprenticeship training taking place through work-process learning in the company: 'while external training can give apprentices an overview in fabrics, dyeing and spinning, basically these activities are really learnt through *doing*. That is why I think it is difficult to learn specific professional skills externally.' To summarise, while the company regards the external training measures as supplementary to the company development strategy, it still thinks that the external support could be further developed to meet specific requests of the company.

6.10.2 Second Case: Company Producing Electronic Devices

This company makes electronic appliances, such as medical devices for domestic and industrial use. It also provides services to third parties through planning,

[7]Language training is regarded as an important additional element in the external course programme.

assembling and testing tailor-made electronic devices. At present, the company has five apprentices out of a total of 30 employees. Each apprentice is supported by a dedicated trainer who is an experienced person with several years working practice and has a good understanding of the overall work flow and business process.

The company selects the apprentices from its hometown. 'Everybody who works here comes from the town – we know practically all the people who live here, and based on this we select the people who match our interests.' After the training, most apprentices stay in the company. Beside school results, motivation level is a high factor in the hiring decision. The training manager stated that the company finds it very difficult to locate properly skilled people on the labour market. 'Up to the present day, we have never found an employee who was already trained for the specific work of our industry. We have tried to find these people in various companies in the electronics industry, but always found that the skills we wanted were not available.'

Training in the company follows a QAS (Quality assurance system) approach that means all work tasks are clearly defined and documented. Instruction is based on this analysis. The training manager explains: 'We keep a file for each trainee which records the duration of training and the type of work carried out. We don't generally train our trainees to run the factory, but show them how to undertake specific areas of work, such as assembling and welding components. A test is given at the end of the contractual training. Then the person responsible for the training writes a report on the basis of which basis a certificate is granted or not. The QAS approach is used also to control the quality of the training.'

Apprentices also follow an external course offered by the regional government. However the company is rather critical of this training because it does not meet its requirements. The training manager stated that: 'everybody is talking about this idea of "regulated vocational training", but in terms of professionalism this is pretty unimportant to us. In fact, economically, it generates a loss for us because the trainees do not learn how to undertake practical tasks in a work context but rather abstract concepts about safety for example. Of course safety is very important, but the point is we are left to do most of the professional training. However, the new apprenticeship law gives trainees the chance to learn different things in the external courses and you cannot leave everything to the companies. They cannot always be up to date about developments within a profession.'

In summary, the interviews with the training managers show that they feel the external VET course are not providing them with targeted professional support. The companies outline the following improvement they would like in the external training:

- Companies need stronger external support/training that is specific to their production needs e.g. technical subject knowledge to supplement in-house training activities. While the new apprenticeship system represents a first step, it is still weak regarding volume and in specific occupation training. A lot of what has been offered so far is too general. The subject-related aspects should be strengthened;

- Due to a loss of productivity the cost of external training is too high in relation the benefits;
- Companies prefer to take apprentices from the local community so that they can travel easily to the external training courses;
- Training styles at the two companies are in line with the traditional three steps method: observing the work of a training supervisor/master; completion of similar task by the apprentice; control and feedback to the apprentice by the training supervisor. Using external support more advanced learning methods, such as project learning, should be introduced;
- Companies are developing on-the-job training programmes that are isolated from their Trade Associations. The latter should be more active in supporting the whole process. This could be implemented through the development of a regional network of trainers and teachers, with the objective to learn together about more advanced training methods.

The last point shows that from the side of the companies there is a wish for regional dialogue between the local stakeholders about experimenting with new ways of training. (For more on this see Deitmer and Gerds, 2002.)

6.11 Current Situation of the Italian Apprenticeship System

The cases show us that, through their own efforts, companies are delivering fairly good training in accordance with the 'organizational picture' of an individual company. However, while the informal in-house apprenticeship training system seems to be working reasonably well, it is still too dependent on the individual (market-driven) interests of individual firms. Companies tend to be merely interested in addressing their own needs with little interest in forming people for a vocational profession that is linked with an official examination. On a positive note, it is a good sign to see a demand for external support from professional and trade associations, local government and external course providers, to come up with new ways of training.

One can conclude that the Italian apprenticeship system seems to more like a 'development-oriented employment' system rather than a fully developed and well-monitored 'skilled occupation/profession development' programme On the structural side, a well defined concept of 'occupation/profession/vocation', based on defined standards, such as the German concept of *Beruf,* is missing. (For an understanding of the German *Beruf* concept see Deissinger, 2001.) These defined standards, governed by state statutes would overcome the limitations of training determined by the needs of an individual firm. State sponsored 'skilled occupations/professions' could deliver a qualification framework that regulates all stakeholders involved, be they companies or external training providers. Furthermore, the apprentices' acquired skills and knowledge would be validated through intermediate and final examinations leading to better recognition on the labour market.

6.12 The European Perspective

In Lisbon in 2000, EU Member States agreed on the so-called Lisbon strategy to make Europe more competitive by 2010. The goal is to create a more dynamic knowledge-based economy in Europe that will deliver sustainable growth, generate more and better jobs and create greater social cohesion. The Lisbon follow-up places a clear emphasis on the role of VET in equipping people with more and better skills and competences for use in the labour market. VET is regarded as the intersection between educational, labour market and economic policies. It is seen as a 'means of up-skilling the workforce, changing work practices and as a motor of innovation. Governments see VET as a means of increasing competitiveness, employment and growth by securing the supply of skills to the economy' (Leney et al., 2004).

The structure of initial VET, which differs from country to country, is shaped by factors such as the national innovation system, regional/local circumstances and the interests of social partners. National VET systems are rooted in different economic and cultural traditions. Consequently, it is difficult to come up with a congruent European VET system. 'Thus (while) there may be some convergence arising from common underlying pressures, the national, regional and sectoral contextual aspects of VET are likely to drive national VET systems in different directions' (Leney et al., 2004).

However, one overarching idea which seems to be valid for all EU Member States is the need to institutionalise regional/local learning partnerships between companies and VET schools or training institutions. This is necessary to ensure that apprentices learn both practical and theoretical skills in appropriate learning venues. There is need for learning in practical work place situations and in external training sites, where more classroom style learning takes place.

Industries have changed quite considerably over recent years so need to come up with new strategies to develop their human resources. The concept of the learning organisation which Argyris and Schön (1999) see as a key competitive factor in modern economies, is one of these new strategies. There is a link between learning organisations, learning in VET systems and individual competence development for apprentices. Nyhan et al. (2003) argue that 'one of the keys to promoting learning organisations is building workplace environments in which people are motivated to think for themselves so that they are learning from their work – they are learning as they work.'

Such a learning concept supports the emergence of a learning culture that links systematic learning with practical learning. Such a culture requires a mixture of learning environments that are work-based and school-based. Modern workers need to develop creativity, autonomy, responsibility and a sense of belonging to a community of practice in their company (EC, 2003). The issue of school-supported, work-based learning comes into play here, raising the challenging question how an interactive transfer between different learning sites can be organised (Fischer et al., 2002). The characteristics of this approach to learning can be described as: (a) work-based and 'real-world' driven (as reflected in the emphasis placed on competence development); and (b) situated in real working environments, i.e. integrated working and learning.

In Europe, the notion of 'region' can be seen as a political strategy to deal with the development of a multi-cultural and economically divergent European Union. VET plays a strategic role in regional development. A theoretical model for an education-led arrangement can be called a 'learning region'. The regional or local focus provides a cooperation framework through which industries and education and training institutes work together (Deitmer and Attwell, 2000). Throughout Europe, innovative community-oriented schools and enterprises are creating strategic partnerships to achieve goals which could not be attained by the different bodies working on their own.

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Chapter 7
Towards Innovative Apprenticeship: The Evaluation of the Development of Integrated Regional VET Centres in Hungary

Magdolna Benke

7.1 Introduction

An urgent need has emerged for the regional system of the institutions of vocational education and training to be reorganized in order to ensure a more efficient level of education and training. As part of the recent modernization of the vocational education and training (VET) system in Hungary, a network of Regional Integrated Vocational Training Centres (RIVTCs) is under development, financed by the Human Resources Development Operative Program. During the first phase leading up to the end of 2006, 16 centres were set up (with the integration of 120 vocational education schools and 6 higher education institutions). This will be followed by the establishment of a further 44 centres by 2013. The official plans require members of the network, eight schools on an average in each Centre, to closely cooperate to harmonize or integrate their management systems and distribute tasks. The advisory bodies of the RIVTCs established with the support of the European Social Fund are composed of representatives of employers delegated by the relevant regions.

The development of the system of the RIVTCs – according to the plans – envisages the total reform of the institutional structure, the concentration of resources and capacities, strengthening of the regional scope and stronger ties with the labour market (Report of the Ministry of Education, May 2005b).

Innovation, the key element within the modernization of VET, cannot be separated from regional innovation, in which the development of partnerships with local stakeholders have crucial roles to play. In this paper I would like to explain how and in what ways these new centres can support and utilize the process of local community and partnership building with different stakeholders in order to develop the quality and efficiency of vocational education and training all around in the country. Apprenticeship training, and its Hungarian version, the so-called 'student contract', is growing in importance recently in the VET system. The connection (co-operation) between apprenticeship training and the RIVTCs includes the opportunity of the

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formation of a new innovative partnership. We have learned from previous research activities that a precise picture of the connection between the economy and the education system can be drawn only on regional level, so we emphasize the 'regional dimension' of VET in our research.

7.2 Research Problem

7.2.1 The Changing Environment of Vocational Education and Training

While modern society is generally characterized by the concept of ownership and labour, in the second part of the last century the dominance of these terms has weakened and a 'new' principle has emerged: that of knowledge. Science and technology have changed the fundamental social institution, labour, education, culture, economy and the political system. While former societies were described as capitalist and industrial, the emerging society is labelled as 'knowledge society', which is rooted in epistemology and in the logic of research. According to newer post-industrial theories, theoretical knowledge functions as the fundamental principle of the society. Knowledge is becoming the leading dimension of production.

The Commission of the European Union discussed the Bangemann Report in 1994, which declared that the industrial society was coming to its end, and announced the transition from the industrial to the so-called 'information society'.

It became apparent to politicians that new information technology would generate radical societal changes, pervading the structure of society, power conditions and the world of work. Since information technology development represents a dominant role in the present technological change, the society of the future is referred to most often, having no real rival as a term, as 'information society' (Farkas, 2002).

The information society places higher demands on the workforce (and the future workforce) in terms of their adaptability, internal mobility and flexibility. One can rarely work for the same company and in the same occupation for a lifetime. There is a strong need to adapt to new and frequently changing tasks at work. One person has to perform duties that are not confined to one occupational category, while teamwork has likewise gained importance.

Traditional jobs disappear or change because of the computerization of work-processes in many companies. Tele-work offers new opportunities for those living far from the traditional centres, or those needing especially flexible working conditions because of their family or health condition.

As for the sphere of work, the challenges of the new society have to be viewed in an economic context. Therefore it is necessary to shed light on some important characteristics of the present-day market economy of Hungary. Firstly, the organization of work takes on different forms. These exist in parallel and at the same time, representing different levels of development and different logic of activity. (Laki, 2001; also Makó and Simonyi, 2003). Secondly, different organizational forms need

different quality of labour and demand various educational and training attainments of employees.

7.2.2 Historical Traditions of Learning and Knowledge in Hungary

In Hungarian society, one can observe that knowledge has very high prestige. Also, a similarly high prestige is attached to learning. The proverb 'We live and learn' and others express these attitudes.

Theoretical knowledge and the intelligentsia are not the only beneficiaries of this phenomenon. Knowledge, embodied in everyday work and other practical activities, also enjoys high prestige. Qualified, skilled labour, the master or an intelligent artisan of an occupational category: all are rated highly by the society. The importance of knowledge and learning cuts across all levels of society.

There is a long tradition of special boarding schools for talented, but poor, students in order to utilize their talent by providing them with a place and time for advancing their knowledge. There is also a wide-spread perception of the teacher as a lantern that brings light to the people. These traditions have a deep impact on contemporary learning society initiatives in the country. But we must not forget that, despite the strong traditions and prestige of learning and knowledge, Hungarian society faces a very low participation rate of the adult population in lifelong learning.

7.2.3 'Innovation Islands' in Hungary in the Socialist Period

Although the so-called socialist period that ended in 1989 is regarded as not enhancing the development of knowledge and new technology, it has to be pointed out that there were several 'islands' of innovation in the Hungarian society. People's boarding schools were established in the early days of the system for talented young people of peasant and working-class origin. Several of them later rose to high social positions.

Taking advantage of economic reforms for greater company and household autonomy, 'enterprise co-operatives' were born as vivid expressions of individual and small team creativity and innovation during the 1980s. Later, as private ownership came to dominate in the 1990s, several private companies (of domestic capital) were born out of them. Many of them managed to successfully adapt themselves to changing economic environment and increasing competition.

Starting with the 1960s, household plots were allowed to be cultivated around private households of the agricultural areas. Some companies that produced for West European and US markets were forced to develop technology and knowledge in their organization.

These experiences served and still serve as very strong and efficient basis for the inclusion of the principles and ideas related to the information society.

7.3 Overview of VET in Hungary

7.3.1 Historical Developments of VET in Hungary

The development of vocational education and training in Hungary began in the Middle Ages (the guild system), but the institutionalization and regulation of the system started in the second half of the 19th century. The origin of the current upper- and post-secondary level initial vocational education and training (IVET) system emerged after World War II, within the framework of a new public education system, which was under almost exclusive state control. The major school types providing IVET were developed in the 1950s and 1960s.

> The short-term 2- or 3-year skilled worker training originated from the German-type dual model and was integrated in the formal school system in 1969. The legal status of apprentices in skilled workers' training or apprenticeship schools (*szakmunkásképző iskola*) became the same as their fellows attending other schools. 'Secondary vocational schools (*szakközépiskola*) were set up by *Act III of 1961 on Education* in line with the contemporary education policy aiming to educate and train skilled workers and provide them also with the maturity certificate that allows access to further studies at tertiary level. Four-grade technical schools (*technikum*) were set up in 1950-51 awarding qualifications that provided access to further studies as well as to the labour market in medium level management positions or skilled worker jobs. After 1969, technical schools were transformed partly into secondary vocational schools, partly into 'upper' technical schools awarding tertiary-level vocational diplomas to their graduate students (these became the predecessors of technical colleges).' (Bükki, 2007)

7.3.2 Developments After the Change of the Political System (1989)

The system of IVET had to be fundamentally restructured and revised after the change of the political system in the 1990s, in connection with the changes in the national and international economic and political environment, influenced by the rapidly changing needs and demands of the evolving labour market. The distribution of participants by school type changed considerably after 1989. The share of secondary vocational schools, also preparing students for the maturity examination (*érettségi vizsga*), increased from 33 to 45 per cent until 2005 (in line with the governmental intention to increase the proportion of school types providing access to tertiary education), while the percentage of students studying in the other type decreased from 44 to 24 per cent.

> The reasons behind this major decline of the popularity of apprenticeship schools (*szakmunkásképző iskola*) and their successor vocational schools (*szakiskola*) include the cumulated impact of decreasing birth-rates (since 1981) and the related counter-selective admission policies of schools that were forced to admit the lowest achieving students to fulfill the school capacities, as well as the outdated structure, infrastructure, and content/pedagogy of their education and training. Practical training provided at a workplace or in company workshops also changed due to the privatization of the former large state-run companies whose new owners often refused to continue training students. The modernization of VET schools began in the 1990s, but especially in the case of vocational schools, it is still in many respects an outstanding task. The transformation of the system of IVET in

> the 1990s began with a series of reforms related to its structure, administration, financing, and the modernization of content, initiated by a number of new laws and regulations. The restructuring was part of the overall reconstruction of the Hungarian educational system, but the economic and social significance of vocational education and training was also increasingly recognized by the Hungarian society. As a consequence, it has now become a key area of government policies aiming to create a modern, effective system of VET, including a flexible and differentiated system of qualifications, in conformity with the internal demands of the economy and society as well as with the regulations of the European Union.' (Bükki, 2007)

One main element of the structural changes of IVET was the gradual replacement of apprenticeship schools by vocational schools with the typical 2+2-year structure. This step was connected to the extension of compulsory education to the age of 16 and the clear separation of general education and VET. As part of a deep reform of the vocational education and training system, VET starts with theoretical vocational education at the age of 16, while practical training starts only at the age of 18.

In spite of the development of the IVET system, there are still many important areas which require further reform. The greatest challenge of IVET is to ensure its adequacy to the fast-changing needs and demands of the economy and the labour market.

7.4 Criticism Towards VET

The political and economic changes in 1989 generated significant transformation in the Hungarian labour market, creating serious challenges for the system of vocational education and training. Even the structure and content of VET was in many respects transformed in the 1990s. Employer organizations and economic and professional chambers have increasingly complained about the mismatch between VET output and labour-market needs in both quantitative and qualitative terms. In some training fields employers report a surplus of VET graduates, while in other sectors and vocations employers find it very difficult to recruit new employees.

Serious criticism has been directed towards VET institutions in the country as a whole in the last few years. The reason is that 'VET does not respond adequately to market needs.' The interests of teachers and students in VET are more easily asserted than those of the employers. They complain that it is in the schools' interests to keep students in the institutions as long as possible. In Hungary, only within the school system there are more than a thousand locations providing vocational training, which is unfavourable both from the point of view of efficiency and that of quality. There is a competition among schools for normative support, whilst parallel training facilities exist within the regions. 'The institutional system currently in force is both ineffective and inadequate.' (Report of the Ministry of Education, May 2005b).

Our experience is that regional institutions, for example labour offices and regional labour development centres, have limited opportunity to influence the behaviour of the main players, i.e. companies, vocational schools, parents and the

like. School-based VET is decided at the local government level. 'Short-term company interests reduce the opportunity to establish a long-term strategy for VET. There is no co-ordination relating to VET at regional level.' (Report of the Ministry of Education, May 2005b).

7.5 The Relationship Between the Economy and Training

We studied the relationship between the economy and training at the regional level. We found different models for the different variants of organizational forms in Hungary, and the consequences originating from these models. Firstly, there are very different organizational forms with different levels of labour quality, different levels of training requirements and different levels of in-company training systems. Secondly, the connection between the economy and the education system is complex, depending on the concrete organizational forms of the companies (since companies are in a state of permanent reorganization, learning and teaching are becoming the most important task of business organization). Thirdly, a precise picture of the connection between the economy and the education system can be drawn only on the regional level.

In the most developed regions of Hungary, the possibilities of extensive development have come to an end. This change appeared rapidly. Foreign capital investment based mostly on cheap labour has been decreasing in several regions of the country (Benke, 2002a).

The new challenge is therefore how to employ the big mass of semi-skilled labour force that became available after some multinational companies left Hungary in the beginning of the 21st century. On the other hand, a shift from extensive to intensive development is needed. This process is characterised by the increasing importance of retraining and a stronger basic professional education and training. New sources for preserving and increasing competitiveness also have to be found.

7.6 Differences in the Level of Regional Development

Significant historical regional differences exist between the capital, Budapest, and the more peripheral areas of the country, according to a number of indicators, e.g. GDP, placement of foreign capital, activity rate, unemployment rate, educational attainment, access to education, and quantity indicators of educational infrastructure. The political and economic transition of 1989 only served to intensify these differences; Budapest and the 'rich' centres developed further, while the already poor peripheral regions became poorer. Differences grew between sub-regions too, in certain areas. Some of the formerly developing sub-regions further enhanced to their advantage, while the development of others slowed down. The 'winners' of the transitional changes are undoubtedly Budapest and the county of Pest, i.e. the Central Region, Western and Northern Trans-Danubia, and the

so-called Pannonia. The 'losers' are Northern Hungary and the Northern Great Plain, which are traditionally less developed parts of the country. It is primarily the poorly educated and unskilled in these 'loser' regions that have suffered.

The question of how to reduce these sizeable differences is of primary concern for the government. Although all relevant stakeholders agree that regional equalization within the indicators mentioned above is needed, debates continue regarding the degree of equalization required and the extent to which the process should be supported by different factors. It is obvious that, amongst other elements, i.e. investment policy and financial policy, employment policy, educational policy and, in general, human resource development, have crucial roles to play within the equalization process. As such, human resource development has constituted the primary focus of our research (Benke, 2002a).

7.7 Human Resource Development, the Modernization of Education and Training

We have learned from former research studies of changing attitudes towards the utilization of the internal sources of power all around the country. In developed regions, the transition from extensive development to intensive development requires human resource development (HRD) and the modernization of education and training to increase the efficiency of education and training, to expand access to education and training to all those interested in learning. In less developed regions, the task of HRD has been to create a minimum basic pool of labour resources, with the intention of maximizing their attraction for the investors. Developed regions choose to place the problem on a higher plane, contrasting quantity and quality of internal sources. Agreement exists among experts and stakeholders alike that innovation is the only way forward for the implementation of HRD and regional development in the future (Benke, 2002a).

We assume that dialogue between local actors on local innovation is still in its infancy and as such dialogue on local HRD is also in its early stages of development.

7.8 Actual Reform Initiatives to Solve the Problems of VET

7.8.1 Strategy of the Development of Vocational Education and Training

The *Strategy of the Development of Vocational Education and Training* was accepted in 2005 for the period of 2005–2013. The main objective of this strategy is to ensure the provision of high quality VET in accordance with the individual and social demands of the 21st century, which could make a contribution to the socioeconomic development of Hungary and also prepare the individual for a successful career through the development of his or her capacities. One of the most important

aims of the 'reform measures' defined in the 1057/2005 (V. 31.) government resolution related to IVET target is the restructuring of the system of VET according to the users' demands, namely by creating a labour-market oriented and adequate VET system, through improving quality assurance, creating a planning system for VET based on labour-market demands, improving the efficiency of education and the involvement of enterprises in practical training provision, etc. Another important target is the development of a more cost-efficient administration and financing system of VET, which includes allowing users a stronger opportunity to advocate their interests. This means making more efficient use of resources and improving the allocation of capacities, which necessarily leads to optimizing the size of vocational training schools, so that the emerging institutions would be able to continuously develop their infrastructure and react promptly to the changing market demands. They could operate in a cost-efficient way, transforming the financing system of vocational training schools to encourage them to adapt their training structures to the changes in the labour market and increase the efficiency of their training (Strategy of the Development of Vocational Education and Training in Hungary, May 2005b).

7.8.2 Development of the Institution System of VET

These targets sit alongside the development of the institution system of VET: among other things, the establishment of *further regional integrated vocational training centres*, which call for the development of the information and statistical system of VET, namely improving the regional labour market information system, ensuring continuous analysis of the employment status of VET graduates, and developing the statistical system of VET.

To close the gap between the structure of supply and demand related to the obtained vocational qualifications of graduates, the so-called *regional development and training committees*, are required to prepare regional lists of vocational qualifications in short supply in the labour market every 3 years, beginning from September 2006. Training activities leading to these qualifications have been encouraged by financial incentives since September 2007. These incentives can be offered both to students and to enterprises which provide practical training on the basis of an apprenticeship contract (Bükki, 2007).

7.8.3 Apprenticeship Contract

Students can enter into an apprenticeship contract with companies to receive practical training at an enterprise in the VET grades of vocational training schools, i.e. at the age of 16 at the earliest (in vocational schools, and at the age of 18 in secondary vocational schools). An apprenticeship contract usually establishes a closer relationship between the student and the enterprise than the so-called alternance training, which is based on a cooperation agreement. Student contracts may be terminated only by mutual agreement specified by the law.

Apprentices can obtain the same qualifications as those available to the other students of vocational training schools. Apprenticeships, however, are often considered to provide students a better chance of getting a job, primarily because they are usually provided in more marketable occupations and also because prospective employers are aware that apprentices have had the chance to master professional and social skills at a real workplace.

7.8.4 Integrated Regional Vocational Training Centres as the Place/Source of Innovation?

There is an urgent need to reorganise the regional system of institutions of VET in order to ensure a more efficient level of education and training (Benke, 2002; 2005). 'The purpose of the government is to promote the development of an efficient, multi-purpose and multi-functional modern educational and training system that provides initial, additional and further vocational training for young people and adults; a system that can be adapted to changes in the labour market.' (Report of the Ministry of Education, 2005a).

According to the official plans, eight schools on average in each Centre will co-operate closely in order to harmonize or integrate their management systems and allocate tasks. Furthermore, the plans state that, in this way, the integrated organization will be able to introduce modular training and will function as a practice-oriented basis for vocational training, and hereby will strengthen practical training in every region of the country.

To help the process of 'responding adequately to market needs', a new, module-based *National Qualification Register* (NQR) has been worked out and documents related to the individual training types have also been completed. These documents serve as a basis for training to begin at the RIVTCs.

All Regional Integrated Vocational Training Centres are being supported by the work of the advisory bodies, which were established with the support of the European Social Fund. These bodies are made up of the representatives of employers nominated by their respective regions.

The government attaches serious hopes to the development of the system of c. According to the official opinions, the RIVTCs 'envisages the total reform of the institutional structure, the concentration of resources and capacities, the strengthening of regional scope and stronger ties with the labour market.'

The building of a new network, the development of RIVTCs all around the country, according to the plans, increases the opportunity for developing both quality and range, in addition to the influence of guidance and counselling.

The main tasks of the newly-established Regional Integrated Vocational Training Centres include:

- Focusing on labour-market needs;
- Providing teacher training;

- Ensuring equal opportunities;
- Offering career guidance and career orientation;
- Co-operating with partners;
- Providing information;
- Increasing the regional dimension of vocational education and training.

In VET schools, it is important to nurture basic competencies, which are not concrete occupational, functional or firm-specific competencies, but exceed the level of the concrete work (occupation), function and firm. These 'general professional' competencies (by being innovation-related) are becoming more important than 'specific' competencies, hence they contribute more to improving efficiency in organizations of work. There is a good chance that RIVTCs can make a very positive contribution to the development of these competencies in students.

7.9 Methodology

My paper is based on two research projects, carried out by a research group under my direction at the National Institute for Adult Education in 2005–2006, and in 2006–2007. The *first research project* examined the problems of educational and regional planning and human resources development in a number of the declining micro-regions of Hungary. The purpose of the research project was to discover how educational and regional planning is able to make a positive contribution to the development of human resources and to promote the catching-up of the peripheral regions. According to the main purpose of the research, special attention was given to vocational education and training as a key element of human resource development in the regions.

The *second research project* started at the end of 2006 and aimed to discover the level of partnership existing between these new centres and the economy, and the extent to which these centres have the preconditions, within their respective scopes, to contribute to the modernization of vocational education and training. Since innovation, which is the key element within the modernization of VET – as well as of learning regions – cannot be separated from regional innovation, in which innovation within local communities and the development of local partnership have crucial roles to play, the project aimed to explain how and in what ways these new centres can support and utilize the process of local community- and partnership-building with different stakeholders. This paper provides a summary of the experience learned from the 16 cases, with particular detail from four cases, and sets out recommendations for further development.

The fieldwork part of the first research project was based on seven case studies (one selected from each of the relevant economic-administrative regions) focusing on the particular characteristics and development processes within the micro-regions. The selection criteria employed were the following: we involved sub-regions, which could present some kind of innovative elements of change

or demonstrate their endeavours to break out of their under-developed position. Furthermore, we studied sub-regions which had the potential – at least theoretically – to achieve, by utilizing human resources at a higher level, a more developed status in the future.

To ensure comparative analysis of the main characteristics of the regional structures, we employed certain aspects as guidelines to help in the preparation of the micro-regional case studies.

We explored, amongst other things, the conditions of VET within the given micro-regions according to the following aspects:

- The infrastructure of vocational education and training provided;
- The location and structure of the programmes offered;
- The demand for vocational education and training;
- The demand and desire to learn, and participation in vocational education and training;
- Access to vocational education and training;
- Promising experiences for broadening education and training opportunities;
- Circumstances which make a positive contribution to the harmonised planning process;
- Circumstances which exert a negative effect on the harmonisation of regional and sector-specific, i.e. educational elements within the planning process.

The case studies were based on the analysis of regional documents, interviews with the key actors (employers, employers' representatives, trade unions, vocational schools, regional labour offices, regional development agencies, local governments) in the regions, and on other relevant research papers. Research of the RIVTCs is based on a review of the available literature, document analyses and interviews with the experts of the centres researched and with relevant stakeholders. In the first step, the research focused on four centres from different regions of the country, which represent different stages of the development process.

7.10 Research Findings

Some of the main lessons derived from the research are the following:

- There are some serious differences between the regions in the way they are able to harmonize the sector-specific (educational) and the regional aspects in the planning and development process.
- The new dimension of 'regionalism' related to education and training, means a real challenge for the entire society: the socialization process, social debates, and social partnership can increase the effectiveness of this learning process.

- According to the result of our research, school-based vocational education was emphasized much more strongly in the regional development plans than adult education and lifelong learning.
- There is an urgent need for reorganizing the regional system of the institutions of vocational education and training to ensure a more efficient level of education and training. Because of the construction of the financial system, the problem can be solved only with the involvement of the government.
- Further research is needed to find out why school-based youth education and training has much stronger dominance in the regional development plans than other forms of education and training.

Up to this phase of the research, the following main findings – sometimes critical in nature – have been explained related to the development of the Regional Integrated Vocational Education and Training Centres:

- Certain areas – such as social partnership – characteristically call for the improvement of cooperation;
- The participation of key actors in the activity of the RIVTCs is formally ensured, but the substantial influence of partnerships is disproportionate compared to that of public administration;
- The delegates arriving from the world of work do not always know the demands of the economy entirely; thereby their representational efficiency may be less valuable (A TISZK-ek munkájának értékelése, OMAI, Budapest, 2007. február. The evaluation of the activity of RIVTC-s, OMAI, Bp, February 2007);
- The involvement of the non-governmental sphere and the operation of social partnerships formally exist and have taken an institutional form at certain points. Even so, additional efforts are required within the educational sector. (The New Hungary Development Plan, May 2007).

Further concrete information on the recent stage of the development process of the RIVTCs are considered to be positive signs for the future:

- *On the individual level*: RIVTCs create an opportunity to participate in more balanced and harmonized training provision;
- *On the organizational level:* the creation of the centres means a learning process of how to operate, how to function in networks (since the centres are planning to harmonize their training supply); RIVTCs ensure a higher level of commitment.

Some negative signs for the future:

- *On the individual level*: it is not clear how the training centres will reduce regional inequalities in access to training in particular (there is no message about knowledge creation!); it is a question how the five big pole centres of the country are

able to contribute to reducing regional inequalities; it is important that employees are not in the focus of the target group of the centres!

- *On the organizational level:* the connection with the representatives of the economy is very weak; according to critics, 'chambers and other employer bodies do not explain their future needs for labour; the teachers have the information what qualifications are required in the future' – these opinions are thought-provoking. (These surprising ideas need very detailed further study of the development process on the organizational level.)

7.11 Conclusions for VET Practice and VET Research

- I would like to emphasize that the given short period of the experience of the establishment of RIVTCs in Hungary provides only an initial outcome of the research. The continuation of the recent project can provide a more detailed picture of the development process of RIVTCs, getting closer to the question of how these centres can make a contribution to the development of innovative apprenticeship in the country.
- Further research is needed to find out how RIVTCs can increase the number of students who sign student contracts and in this way participate in the Hungarian version of the apprenticeship system.
- It is essential to increase the interest of stakeholders in the revival of the apprenticeship system, the encouragement of the student contracts.
- In VET schools, it is important to nurture basic competencies that are not concrete occupational, functional or firm-specific competencies, but exceed the level of the concrete work (occupation), function and firm. These 'general professional' competencies (by being innovation related) are becoming more important than 'specific' competencies, hence they contribute more to improving efficiency in organizations of work. There is a chance that learning in RIVTCs provides students with the opportunity to acquire these competencies.
- The above findings of research of the development process of RIVTCs call for a broad partnership of different disciplines, especially the involvement of regional development studies on further research and development related to vocational education and training.
- Since the new dimension, 'regionalism' related to education and training, means a real challenge for the entire society, research on VET should emphasize the importance of the regional aspects on this field. VET policy should make a contribution to the development of the regional consciousness of the society.
- The main characteristics of RIVTCs are based on the partnership of schools, a new type of leadership and strong communication with the representatives of the economy. The research findings indicate the need to place consciousness on the significance of partnership to a higher level.

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Chapter 8
The Distinct Nature of Work-Based VET in England: A Reflection of Employer Interests?

Michaela Brockmann, Linda Clarke, and Christopher Winch

8.1 Introduction: The Problems for VET in England

The Nuffield Review has demonstrated many issues confronting English 14–19 Education (Hayward et al., 2006). Some of these are longstanding, such as the excessive academic divide and the conceptual confusion between training, vocational education and academic education. Some, though in existence for a long time, are only now attracting concern because of their growing importance, such as the proportion of the age group who are NEET (not in education, employment or training) and the decline of work-based routes into vocational education (HM Treasury, 2006; Hayward, 2004). Others again are pressing policy issues, such as the inauguration of Specialist Diplomas for the 14–18 age group and the proposed raising of the age of compulsory participation in education to 18 by 2015 (Nuffield Review, 2008a; 2008b).

At first sight, the English 14–19 situation is similar to that in many continental European countries. There is in England a mixture of college and work-based routes and, officially at least, a commitment to increasing the knowledge and skills of the workforce and to extending participation in education as a key means of achieving this. An 'outcomes'-based approach to qualifications – which lies behind English innovations such as the NVQ (National Vocational Qualifications), APEL (Accreditation of Prior Experiential Learning) and modularisation – has also been adopted, and the National Qualifications Framework (NQF) served as the basis for the new European Qualifications Framework (EQF). Such similarities suggest a degree of convergence.

These surface similarities hide profound differences in the nature of VET in England. A fundamental issue is the paucity of recognition that there is something of substance behind the term 'vocational education' (Ryan et al., 2006). 'Training' and 'vocational education' are used interchangeably, but increasingly the meaning

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of 'vocational education' is being assimilated to 'training' in a quite narrow sense of that term. There has been a tradition in England of combining educational elements with on-the-job training, including day and block release for apprentices, involving – as a result of the 1944 Education Act – an element of civic education. There are also well-established awards, such as the BTEC National Diploma, which incorporate significant elements of theoretical knowledge relevant to the occupation for which the candidate is preparing. The historical problem has been, not that such programmes have not been successful, but rather that – with important exceptions such as under the Industrial Training Boards (e.g. the Construction Standard Training Scheme of the 1970s) – they have never succeeded in establishing themselves as major alternative routes from school to work, with sufficient prestige to gain widespread confidence and recognition from the government, parents, young people, trade unions and employers (Winch and Hyland, 2007). This is reflected in the constant ebb and flow of new initiatives and qualifications in the area over the past 20 years. The Diploma programme is expressly described as an educational, not a 'vocational educational', route to a prestige qualification.

At the same time, however, there has been a move away from the 'educational' and towards the training conception of non-academic 14–19 education. This is particularly true of work-based routes which are not only in quite a parlous state, but do not attract the attention and concern that they might. The work of Ryan et al. (2006) suggests that even those employers who are currently committed to high quality training discount the importance of an educational element on their programmes. This is even more the case for employers who take a more task-based approach to workplace training. One of the striking findings of our research in relation to the construction and logistics sectors is that, with some few exceptions, the predominant view from an employer and Sector Skills Council perspective of work-based learning in England is that it should be confined to the immediate requirements of acquiring the skills associated with a particular job or task. Not only is further learning regarded as superfluous, but a positive hindrance to effective working. It is not simply that these are ingrained positions but that they seem to be gaining in strength. This produces a tension between the government's stated aim of increasing the knowledge element in the economy and the view of most employers that what really matters is the ability to carry out ready-to-hand tasks in the workplace through training for immediate and short term skill requirements.

The Apprenticeship programme is an example, remaining fragmented into different elements – the NVQ, Technical Certificate and Functional Skills – and frequently criticised for the narrowness of the knowledge and skills base. Theoretical and background knowledge provides an important part of the educational or 'Technical Certificate' element in the programme, but is not sufficient as there is currently no means of integrating it directly with work-based learning and practice. Continuing general education is currently confined to Functional Skills, an unpopular element largely because it is perceived by both employers and employees as decontextualised and unnecessary. As a form of continuing general education, it is narrow and unduly utilitarian and hardly 'fit for purpose' as part of a continuing educational offer. The NVQ element too is associated with fragmented and narrow skill sets

due in part to the limited scope of activities encompassed in a single qualification, which is itself constructed from a limited task analysis (Green, 1998). With the Technical Certificate having been dropped by some sectors and NVQs as an integral structuring element and key output in terms of funding, the apprenticeship system in England is typically oriented towards acquiring a narrow range of skills with minimal underpinning knowledge.

The result is that it does not really constitute a coherent vocational educational offer, although comprising elements of an educational nature as well as on-the-job training. Underpinning knowledge as recognised in Technical Certificates is also currently assessed separately from the workplace skills of the NVQ and from 'Functional Skills'; the NVQ too may be assessed prior to the Technical Certificate. This means that the theoretical and underpinning knowledge is, for assessment purposes, irrelevant to the ability to perform the prescribed tasks. As a result, it is not possible to gauge an individual's ability to apply theory to practice as this is not tested within the NVQ.

The educational component of work-based programmes such as the Apprenticeship is generally located in the local Further Education (FE) College. Of critical and growing importance in terms of VET are those in FE colleges not classified as apprentices but on non work-based vocational routes, including in areas such as construction or engineering. For instance, nearly two-thirds of construction trainees fall into this group, the remainder being attached to employment through, for instance, apprenticeships (ConstructionSkills, 2006). Such vocational courses offered in FE are of a more 'vocational' nature than those currently available in schools to those without the requisite GCSEs to go on to 'A' levels or, indeed, than the planned school-based diplomas. FE colleges are also better equipped than schools in terms of workshops and equipment. However, though geared to preparing the student for work in a particular occupation, FE students on vocational courses, being college-based, are often unable to obtain the necessary work experience to obtain employment. As a result, many drop out and many more are unable to enter their chosen labour market field. Thus, current VET provision in England is marked by a widening gap between, on the one hand, the FE College route, providing comprehensive vocational programmes but with limited scope for employment, and on the other the work-based route with increasingly narrow qualifications and minimal underpinning knowledge.

8.2 Research Problem

The UK's low skills base and low participation rates in post-compulsory schooling compared with other major Western economies have been long-standing concerns of successive governments. Current government initiatives such as the raising of the compulsory leaving age for education and training from 16 to 18 from 2015, the expansion of vocational education programmes for 16 year olds through the introduction of specialist Diplomas, and the aspiration – as expressed in the Leitch

Review – to raise skill levels of the adult workforce are the latest in a long series of measures (HM Treasury, 2006; House of Lords, 2007). Thus, an increase in the provision of work-based initial as well as continuing vocational education forms a central element of government initiatives. In particular, a commitment to doubling the number of apprenticeships to 500,000 by 2020 presents the cornerstone in the government's policy to raise participation in education and training. Clearly, work experience is a vital part of vocational education, whether from a college basis or through apprenticeship, facilitating the transition of young people into the labour market. However, although more critical, the ability to provide an integrated system of work-based VET in England is becoming increasingly problematic.

Against the background of the recent debate and policy initiatives, the paper examines the scope for increasing the capacity of work-based VET in England. It highlights the problems associated with provision, including the assimilation of vocational education to training in a narrow sense and the lack of an integration of the different elements of work-based VET, above all apprenticeships. The work-based VET route in England is shown to have particular weaknesses due to: the generally low status of VET; its governance and especially the lack of representation of employee interests; and the growing difficulties of obtaining employer engagement. Whilst the latter aspect is part of a European-wide phenomenon, in other respects the English system remains distinct. The question is asked what the English system can learn from the continental system of dual apprenticeship.

8.3 Methodology

The paper will draw on secondary material as well as on evidence from our current research on vocational skills and qualifications in England, Germany, France and the Netherlands. The study combined a range of methods, including an analysis of policy documents as well as documentation related to VET pathways and provision. We also conducted interviews with key stakeholders both at national level (policy-makers and social partners) and at the level of firms and training providers. The aim of the study has been to explore differences in understandings of qualifications and skills across Europe, the way these are imparted through the vocational education system and deployed in practice in the workplace.

8.4 Research Findings: The Weakness of the Work-Based Route

8.4.1 The Low Status of VET in England

The work-based route in general and apprenticeships in particular have been characterised by poor provision (in terms of quantity and quality) and low take-up in England. For example, in 2005, only 7.5 per cent of 16–18 year-olds were

on work-based routes, the vast majority of these on Level 2 apprenticeships (5.1 per cent of 16–18 year-olds). In addition, while there has been an increase in apprenticeships, this has mainly been at Level 2, while the number of Advanced Apprenticeships has been decreasing (LSC, 2007). Research suggests the variable quality of current provision, with low completion rates and low standards in many sectors (Fuller, 2004; Ryan et al., 2006).

In 1994 the Modern Apprenticeship (at Level 3) was introduced as a flagship policy to produce the intermediate workforce needed for a changing economy (Fuller and Unwin, 2003). However, with the introduction of the 'vocational ladder' in 1997, whereby apprenticeship was extended to include Level 2, the scheme has increasingly served as an instrument of social inclusion for low school attainers. Indeed, as indicated above, the increase in apprenticeships has largely been at Level 2. Completion rates, though improving, are very low by international standards (56 per cent for Level 3 and 54 per cent for Level 2 in 2005 (LSC, 2007)).

The low status of VET is in large part a result of the institutional divide between academic and vocational education in England (Pring, 2007). A host of factors combine to encourage students to stay on in full-time education, not least government policy to increase participation in higher education to 50 per cent of 18–30 year-olds, school funding regimes, and the poor quality of information and guidance on VET pathways. This has resulted in all but the lowest-attaining students continuing to A-levels and goes a long way towards explaining the low status and low take-up of apprenticeships, with employers often complaining about the poor quality of students. The Nuffield Review has been prompted to ask whether it is possible or indeed desirable to give the apprenticeship model the dual aims of producing intermediate skills and providing a means of social inclusion (Nuffield Review, 2008b).

8.4.2 Governance

A further major obstacle to improving the provision of apprenticeships may be found in the structure of governance, particularly the role of the state and the trade unions and the weak nature of the regulatory framework. One issue concerns the changed role of the state in what is essentially a bipartite system of potentially conflicting interests. For example, the government focus on meeting quantitative targets for apprenticeships to improve intermediate skills may not be in tune with employers needs. The concern with numbers has implications for the quality of provision, as the level and content of programmes is lowered in an effort to attract employers – creating a vicious downward spiral. This is also evident in the suggestion in the Green Paper on raising the education and training age, to recognise a broad range of training provision (DfES, 2007).

A second and crucial issue relates to the lack of collective interest representation of the social partners. Sector Skills Councils (SSCs), in developing qualifications such as NVQs, consult with only a few, usually larger, employers, while many others are not represented (Farlie, 2004). The practice of employer lobbying for having their particular skills needs embodied in nationally-recognised qualifications has

had a detrimental effect on the quality of programmes and led to the fragmentation of qualifications, and the narrowing of skills and knowledge (Brockmann et al., 2008). In addition, as employers tend to focus on existing practices, the scope for innovation is limited.

Most serious is the extent to which the interests of employees have been marginalised within the current English framework. Not only have the trade unions now been written out of apprentice contracts and have no formal role in the modern apprenticeship, but they have also no or only a minimal presence within the entire institutional framework for VET. The implication is that employees or trainees interests tend to be excluded.

8.4.3 Lack of Employer Engagement

The lack of employer engagement is a further major problem in the provision of apprenticeships, and has been attributed to the particular system of governance in England. As the recent House of Lords Review of Apprenticeships points out, the regulatory framework marginalises the role of employers in terms of recruitment and indeed provision of major training for apprentices, thus deterring them from providing placements (House of Lords, 2007). Under the current system, the local SSC – via training providers – is responsible for securing places by approaching employers, handling the paperwork and ensuring requirements are met. Thus, many employers are not involved in recruiting apprentices, often leading to inappropriate placements of young people, supporting the call for a 'clearing house' to allow the proper matching of prospective trainees with employers.

The House of Lords Report, like previous commentators, calls for greater control to be given to employers on the grounds that this will overcome current difficulties of employer disengagement. The Report suggests a set of basic minimum requirements which every apprenticeship programme should meet, in particular at least one day a week or equivalent off-the-job training and 'further development' of functional skills. All funding for apprenticeships should, it is advocated, go within 5 years directly to employers, as a powerful incentive to provide more places, with employers then in turn subcontracting any off-the-job training. The presumption is, therefore, that employers are generally interested in providing apprenticeships. However, there are major structural factors (mainly in relation to the labour market) that strongly suggest that this is not the case. Channelling what are extremely modest amounts of funding to employers is unlikely to hold up against powerful labour market rationales.

One of the key problems for employers in providing work-based learning is the change in the labour process. The workplace is an increasingly capital-intensive and sometimes physically dangerous place, a risky environment in which to place young people with little or no experience; it can be extremely specialised, only providing work-based learning for a restricted set of activities; it may lack the necessary infrastructure, including personnel to train, to support work-based learning, and the costs

of good quality apprentice training may be too high for the individual company to plan for a rate of return, especially when it does not have a long-term perspective. Work-based learning, especially apprenticeship, depends too on stable employment relations and these are changing, with the individual worker less and less regarded as the long term employee of a firm, developed initially as a trainee.

This changing nature of production has meant that the definitions of an employee have become unclear (EC, 2007a; Deakin, 2007), as have those – through subcontracting, outsourcing and the increasing fluidity of ownership – of an employer. The increasing use of agencies, temporary workers and the self-employed has meant that employee status is no longer necessarily identifiable with the individual permanent contract of employment (Clarke et al., 2007). Throughout Europe, and particularly in certain sectors, such changes are evident, varying according to the particular employment regime and posing a threat to current apprenticeship arrangements which continue to be premised on clear and individual employer and employee relations (Gallie, 2007). These tendencies also undermine attempts to provide high quality work-based vocational education, in which theoretical underpinning is integrated with workplace practice, thus counteracting government policy for better quality vocational education in order to adapt to a more high-skill economic environment (Keep, 2002; Bosch and Charest, 2006). Their impact and policy implications have recently been the object of scrutiny by the European Commission (EC, 2007b), including the change from a Fordist manufacturing-based model of employment to a post-Fordist service-based model.

Thus, important reasons for the lack of employer commitment are the changing structure of many industries and labour processes and the nature of the employment relationship. For example, in construction, the practice of 'bogus' self-employment and large scale sub-contracting (Watson and Sharp, 2007; Clarke et al. 2007) strongly militate against the recruitment of apprentices. Those who are self-employed or act as small-scale subcontractors have neither the capacity nor the will to engage apprentices and provide work experience. It has also been suggested that 'new' sectors without a history of providing apprenticeships, such as IT, may be less suitable for traditional programmes of skill formation (Nuffield Review, 2008a; 2008b). Given these changes in employment and production, the question raised is, what is the new role of the employer in work-based VET?

A further factor accounting for the lack of interest is that, for reasons of costs, some employers prefer upgrading existing staff or recruiting ready-trained employees (Ryan et al., 2006). This practice is also promoted by government policies, which potentially conflict with more high-quality programmes, such as Train to Gain, which channels funding to employers for training in immediate skills needs. In some sectors, such as construction, migrant labour is employed ostensibly to cope with skills shortages but also because this is a far easier option than taking on and training apprentices (Clarke, 2008).

Many employers who provide apprenticeships, particularly in so-called low-skill sectors such as retailing, do not see it in their interest to provide high-quality programmes with a recognisable technical content (Ryan et al., 2006). They may

ostensibly adhere to requirements but just provide some minimalist version of 'off-the-job' training 'in the room next door' (House of Lords, 2007). They may also be subsidised for the 'specific' skills training, identified by Becker (1993), which they would otherwise provide themselves. Government policy suggests that apprenticeship programmes should be tailored to employers' needs, yet, one of the shortcomings of the current system is that NVQs, as the main pillar of the framework, narrowly reflect immediate business interests. Re-routing funding to employers with only a minimal set of requirements, as suggested in both the House of Lords Report and the Leitch Review of Skills, is therefore likely to perpetuate the high variability of quality while not addressing the shortage of places. Indeed, the evidence suggests that only a system which is based on collective interest representation in combination with a robust regulatory framework can foster a high-status and high quality apprenticeship system recognised by employers and prospective apprentices alike (Bosch and Charest, 2006). What is urgently needed is a mechanism that allows employers and trade unions to develop programmes that reflect the interests of both employers and employees/trainees and in this respect the English system has much to learn from the continental dual system of apprenticeship.

8.4.4 Learning from the Dual System

One way in which the gulf between college-based routes (offering little prospect of employment) and work-based routes (offering little prospect of developing knowledge) might be bridged is through the combination of work and college that is well-established in Germany, Austria and Switzerland and known as the 'dual system' (Dubs, 2006). Under the dual system young persons are, as apprentices, in employment but remain within the ambit of education and are offered a systematic programme of work-based development combined with simulated workshop-based training in a specialist centre, both of which are sequenced and integrated with a more academic and civic element. This is achieved largely because the system is developed and governed by all those involved – employers, trade unions, educationalists and government. Young people may be classified as employees and allocated places as vocational educatees (*Auszubildende*) while at the same time being employed by a firm and following, over a period of between 2 and 4 years, a combined programme of work and study that has as its aim the development of an integrated occupational capacity (*berufliche Handlungsfähigkeit*) of a broad nature. These employment places are related to one of 350 recognised occupations in Germany whose requirements in terms of knowledge, technical skill and social and individual characteristics are jointly negotiated by the industrial social partners (trade unions and employers) and clearly set out (Brockmann, 2007). The Swiss system offers perhaps most lessons for the British in its combination and integration of school and work-based VET systems.

In Germany, the problem of providing systematic work experience was apparent even in the 1970s, leading employers in a number of sectors to establish a third component in VET programmes, specialised training centres and workshops, to provide

simulated work experience, complementing both the vocational education provided in colleges, the *Berufsschulen,* and work experience in firms (Clarke and Herrmann, 2004). The complementary roles of the workplace, the training centre and the college in the German system are delineated and a division of labour between the three is understood. The classroom-based college handles the underpinning theoretical knowledge for the occupation but also, and importantly, the continuing civic and general education. The workshop aims to apply and embed knowledge in a relatively safe, controlled, stimulatory practical environment. The workplace, on the other hand, is responsible for context-specific knowledge and supervised work, gradually involving the young employee in more and more responsibility as s/he gains in experience and maturity and is better able to apply the theoretical elements of vocational education to the workplace activity. The goal is to develop an employee who is capable of independent action and judgement across a broad range of activities within an occupation and industrial sector, able to plan and evaluate his or her own work and to work with others in teams and across occupational boundaries (Clarke and Wall, 1998). It is important to this conception of vocational education that the final qualification results from the assessment of this integrated ability in which the developed knowledge and personality of the *Auszubildende* are all engaged in extended work activity. Theoretical knowledge is assessed separately in order to gauge the *Auszubildende*'s ability to work in a variety of hypothetically relevant situations. However, because the practical examination comes at the end of the period of vocational education, including the theoretical element, that element is presupposed in the final assessment.

However, whilst successful educationally and in terms of constantly improving both the knowledge base and productivity, the system is also confronted by a number of difficulties. It is, in the first place, vulnerable to individual employers being willing to offer places, and these have for a number of reasons become scarcer. As outlined above, the modern workplace may, for instance, be too hazardous for a young and inexperienced person to be exposed to, the equipment may be too valuable and the activities undertaken by any one firm may be too narrow to provide the grounding for an occupation. Similar difficulties confront the work-based element of schemes throughout Europe. One solution is that offered by the Dutch model, where vocational education is organised on the basis of groups of employers, responsible for group training centres and offering the student a range of activities not possible for the individual firm (Westerhuis, 2007). But even this group system is vulnerable to employer reluctance and the tendency is for vocational education increasingly to take two routes, college and workshop based, as in the French and Danish models (Méhaut, 2007). It is possible also in the Danish system for those unable to find an employer willing to offer a training place to undertake a programme of vocational education on a college basis, combining this with work experience at any time during the programme when a placement is found.

In Germany, changing work organisation and accelerating technological advances, have resulted in major reforms aimed at enhancing the relevance and applicability of theoretical knowledge to workplace practice (Boreham, 2002). The introduction of 'learning fields' in the 1990s in particular represented a shift away

from traditional subject-based towards practice-oriented learning, based upon the needs of the occupation. Other didactic innovations include self-organised and project-based learning. These new 'action-oriented' forms of teaching and learning posit the apprentice/worker as an active producer of knowledge able to deal with complex and unpredictable work situations, thus enabling flexibility and innovation (Halfpap, 2000). The emphasis is clearly on the development of holistic competence (*Handlungskompetenz*) by promoting autonomous thinking, learning and action-taking (Rauner, 2004). This contrasts with the English model which lacks a notion of competence development through the integration of theoretical and practical knowledge by the reflective worker and instead focuses on ability to perform narrowly prescribed tasks.

These systems therefore offer important lessons for the English VET system with respect to:

- integration of the different elements of the VET programme and assessment of these;
- joint negotiation of the scheme with employers, trades unions and educationalists;
- the broad-based nature of the VET and the resulting qualification, including the range of activities encompassed by each occupation and the inclusion of civic education;
- the 3 locations – VET school, training centre and workplace;
- the integration of school and work-based VET routes.

8.5 Conclusions

The scale of the challenge facing England in raising the compulsory education leaving age and in obtaining the enthusiastic and productive participation of young people in education is enormous and will require major reform if it is not to lead to further disillusion and disaffection. A coherent system of VET, containing an important element of applied theoretical practice combined with systematic and guided work experience, as opposed to simply training for a narrow range of skills, could form the basis for a much expanded education route within the UK context, whether this be college or employer-based. Many young people are attracted to the idea of being educated and prepared for employment in a specific occupation or industry as opposed to an extended academic route (Archer and Yamashita, 2003).

A crucial precondition for improving the quality and quantity of provision is the development of a system that accommodates the needs of all stakeholders, including the interests of employees and students. This should be weighted towards the long-term value of VET in facilitating employment for a working life and meeting the educational needs of young people, providing a counterbalance to employers' short-term interests which overwhelm the formulation of policy. This must be part of making the VET route an attractive option for all students and is also crucial in the context of raising the leaving age for education of training and the entitlement to an apprenticeship place announced in the Green Paper.

The instrumental view of work-based learning has however become so strong that it will be a struggle to successfully advocate a work-based educational, as opposed to a training, route. This will nevertheless be necessary if the agenda to raise the aspirations of young people, combat disaffection, increase educational participation 14–19 and establish clearer and better accepted pathways from schooling into work is to be realised. In the light of the difficulties in relation to expanding work-based routes, such as apprenticeships, one possible solution might be the integration of work-based learning into quality college-based routes.

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Chapter 9
We Need Them, They Need Us: Work-Based Learning Programmes for Young People in the Mediterranean Region

Richard Sweet and Helmut Zelloth

9.1 Introduction

This article examines programmes for young people that combine learning in classrooms with participation in work in ten Mediterranean countries: Algeria; Egypt; Israel; Jordan; Lebanon; Morocco; Syria; Tunisia; Turkey; and the West Bank and Gaza. It is one element, together with the development of a network of policy makers and experts from the participating countries, a study visit to the Netherlands and a peer review visit to Turkey, of a European Training Foundation project on work-based learning for young people in the Mediterranean region that was conducted during 2007–8. This in turn was part of a wider project, taking place over several years, on education and training for employment in the region.[1] One of the key objectives of the project was to help the countries of the region learn from one another's experiences as a way of improving both policy and practice. The article is based on ten national reports that used a common analytical framework, on field visits to four of the countries, on a study visit to the Netherlands, and on meetings of national experts and policy makers. Its analytical framework focuses both upon ways in which institutional and systemic factors influence the scale character of work-based learning programmes, and upon the impact of incentives and social capital (networks, trust and co-operation). It examines a wide range of programmes: some that are called apprenticeships, and many that have other titles, but which share some of the same characteristics.

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[1] Further details of the wider MEDA-ETE project can be found at <www.meda-ete.net>

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9.2 The Regional Context[2]

The scale and character of work-based learning programmes for young people in the Mediterranean region are influenced by a number of economic, demographic, labour-market, educational and cultural factors. High rates of economic growth in recent years have been fuelled by structural reforms including economic liberalisation, by the increasing opening-up of economies to international trade, and by foreign investment. These trends are shifting the region's employment base as manufacturing for export markets grows, thus changing the demand for skills and qualifications. Nevertheless manufacturing-driven demand for vocational skills is unevenly distributed in the region: for example, industry accounts for around 60 per cent of GDP in Algeria but only around 20 per cent in Lebanon.

Despite recent growth, some of the countries of the region remain quite poor: perhaps half or more of the population of the West Bank and Gaza live in poverty, and even in Morocco where economic growth has recently been very strong, as many as one in five of the population live in poverty.

In all countries of the region the population is a young one, and it is growing far more rapidly than in Europe. This places considerable pressure upon governments to find jobs, education and training for young people. High population growth and the flow onto the labour market of large numbers of young people helps to explain one of the paradoxes of recent economic growth in the region: it has not been able two generate sufficient jobs to meet the needs of all who want work. And so unemployment, and in particular among young people, remains high. However the formal unemployment rate is an imperfect indicator of the shortage of stable regular and jobs in the region, with all countries experiencing significant underemployment and having a large informal sector: this accounts for perhaps half or more of all employment in Egypt and Tunisia. Unregulated, invisible, in unregistered or unincorporated enterprises and unprotected by legal frameworks such as social security contributions, the informal sector forms both an inadequate foundation to which to attach structured and regulated employment and training arrangements for youth, and a limitation upon the expansion of these arrangements. Unemployment, and differences among countries in its incidence, is also important in helping to constrain demand for skills, as it reduces employers' incentives to invest in skills and technology rather than rely upon a plentiful supply of cheap labour. The existence of large numbers of small, medium and micro enterprises is another factor with implications for work-based learning programmes in the region. In Jordan, for example, enterprises that employ less than five people account for around 90 per cent of all enterprises and over a quarter of all employment.

In countries such as Morocco, Turkey and the West Bank and Gaza, early school leaving is a significant problem, and in Egypt and Morocco illiteracy is an issue. Both factors place pressure upon governments to meet the needs of those

[2]Much of the statistical data that underpins the analysis in this section can be found in Sultana and Watts (2007).

young people who find it hardest to gain jobs. In nearly all countries of the region vocational pathways are smaller than is typically the case in European countries, with professional and white-collar work being highly valued. This both places a limit upon the size of work-based programmes and increases the chances that they will attract the lowest-achieving students. As a result, they will be seen as a low-status residual pathway.

Whilst cultural factors, such as gender stereotyping and the role of the family help to influence the attractiveness of vocational, including work-based, options in the Mediterranean region, these are not unique to the Mediterranean region, and can be found in most European countries, even if their relative scale and importance might (or might not) be greater within the Mediterranean region.

9.3 Combining Work and Learning: Why? How?

For some 30 years or more the combination of work and learning has been an attractive, if not seductive, idea for policy makers. Influenced in part by evidence from apprenticeships in German-speaking countries, this has been based upon four sets of arguments. These are that it can: improve pathways to adulthood; deliver economic and labour market benefits; improve pedagogy; and reduce costs and increase capacity within the vocational education and training system. Whilst there is certainly research evidence in favour of this support for work-based learning programmes for youth, there is also evidence that other types of transition pathways can lead to good outcomes for youth. In the case of apprenticeship and other work-based models, the evidence indicates that they need to be done well if they are to succeed.

Certainly very few European and other OECD countries have large work-based systems for young people. The combination is a difficult one to achieve on a large scale: it requires well-developed institutional support in the labour market and in qualification systems; and it requires effective co-operation between employers and educational institutions, between the public and private sectors, and between education, labour-market, economic and social policies. A number of examples such as Korea, the United Kingdom and the United States can be found in recent years in which the attempt to develop such systems has not been a success, although these examples can be balanced by cases such as Ireland and Norway, in which some success is evident. Both the examples of failure and the cases of success suggest a number of factors to be important. These include:

- Coherence within the several parts of a national vocational education and training system;
- Coherent financing and regulation methods;
- Attention to the reality of the ways that enterprises operate and the ways in which work is organized;
- The involvement of employers and trade unions;
- The ways in which qualification systems relate to the labour market; and
- Close relationships between firms and schools at the local level.

9.4 Models of Work-Based Learning in the Mediterranean Region

In all countries in the region there is a long tradition of skill development through informal or traditional apprenticeships. Although reliable data on their extent exists in no country, they still represent the main training route for some sectors and occupations: for example crafts, the construction sector, retail trade, garment making and repair, and automobile maintenance. Typically, informal apprenticeships take place entirely within the workplace and do not involve any complementary classroom-based education or training.

In addition to these informal arrangements, the project has revealed nearly 30 formal work-based learning programmes or schemes. They can be classified into three groups:

- Well-established programmes that have relatively large numbers of participants, that represent a reasonably larger share of the upper-secondary initial vocational education and training system, and that have a sound institutional base. Included here are Algeria's apprenticeship programmes; Morocco's alternance and apprenticeship programmes; Turkey's apprenticeships and internships; and Jordan's Applied Secondary Education.
- Long-established programmes that have become a normal part of the country's vocational education and training system, but which have remained very small, particularly in relation to vocational education and training that is completely institution-based. Included here are Egypt's PVTD (Productivity and Vocational Training Department, Ministry of Trade and Industry) and Ministry of Education programmes, and Israel's apprenticeships and enterprise-based training.
- Relatively recent, small pilot programmes that in many cases still depend upon support from donor agencies for their continued existence and viability. Examples include programmes in Lebanon and in the West Bank and Gaza, Syria's pilot apprenticeships and perhaps also the Egyptian Mubarak-Kohl Initiative (MKI).

While it is difficult to accurately estimate the absolute and relative size of these programmes, it does seem that, in nearly all countries of the region, work-based learning currently offers very few opportunities to young people. A large part of the reason for this in some countries – notably Lebanon, Syria and the West Bank and Gaza – is that vocational education and training itself appears to be a quite small component of the education system. However, in cases such as Egypt, Israel and Jordan the main reason seems to be the dominance of institution-based programmes within the overall vocational education and training system. Only in Algeria and Turkey, and perhaps also in Morocco, have work-based programmes reached a share of either vocational education and training or of overall educational participation that is comparable to that found in some European countries.

In almost all of the programmes that came to light in the study, entry is limited to those of the normal age of secondary education, and occurs at the normal age

of entry to secondary education. Reflecting this, in almost all cases programmes require completion of basic, primary or compulsory education for entry. This does not guarantee that they are equal in status to other secondary-level programmes. In many cases, such as Jordan's Applied Secondary Education programmes, lower achieving students are streamed into them, often unwillingly, on the basis of their performance in primary or compulsory education. In many cases this low status of vocational education and training and work-based learning persists even though a clear route has been created from it to tertiary studies, and even though it leads to a normal secondary certificate.

However, the problem of low status for work-based forms of vocational education and training is, in some countries, compounded by segmented vocational education and training systems in which work-based programmes lead to lower-level qualifications than do other programmes: for example in Morocco and Israel apprenticeships have been designed largely for school drop outs.

Wide variation was discovered in the ways in which programmes are structured: for example in typical duration (from 1 to 4 years); the proportion of time spent in the workplace (from as low as 25 per cent to as high as 80 per cent) and in attendance patterns. In some cases neither the needs of young people nor the needs of industry seem to explain these differences.

Despite limitations in the available information, it seems as if many programmes are focused quite heavily upon the traditional manual trades and upon blue-collar work, and have made little impact upon more modern areas of the economy, upon the service sector, and upon higher-skilled occupations. Nevertheless there are some interesting exceptions. Egypt offers programmes in business, commercial and hotel and catering fields; programmes in telecommunications and nursing can be found in Syria; and in Algeria programmes have made a strong intrusion into white-collar work, the service sector, and the higher levels of the country's vocational qualifications system.

In nearly all cases, the off-the-job complementary education and training contains both vocational theory and practical work, but programmes in which this contains only vocational theory exist in Algeria and Tunisia, giving rise to questions of quality and of the appropriate co-ordination between the workplace and the off-the-job institution. In some countries, programmes make use of an initial period of pre-employment training, and this can help to develop basic skills before the young person begins work, as well as improving vocational decision making.

9.5 Assuring the Quality of Work-Based Learning

The quality of learning in the workplace can be influenced in a number of ways, and examples of all of these can be found among the ten countries taking part in the project. These methods include:

- *Influencing the selection of firms*. The involvement in training, including through helping to screen firms that train young people, of employer organisations in the

region is not well developed. However crafts chambers are involved in selecting firms to take part in Morocco's apprenticeship programme, and in Turkey and Egypt educational institutions help to play this role.

- *Training enterprise staff*. Formal programmes to train the enterprise staff who in turn train young people at work can be found in Turkey, Syria, the West Bank and Gaza, Morocco and Algeria. However, delivering sufficient places in such programmes and assuring employer attendance remain problems.
- *Inspection systems* can be found in Israel, the West Bank and Gaza, Algeria and Tunisia.
- *On-the-job training tools*. Examples were discovered either of tools such as competency lists to indicate the content of in-firm training or of log books to record the training undertaken in countries that include Turkey, Morocco, Jordan and Syria. However these seem to be of varying effectiveness and thoroughness.
- *Networks and relationships*. In a number of the countries of the region, the staff of educational institutions undertake visits to training firms, although often these visits are inspectorial rather than pedagogical in nature. A Syrian training programme for educational and enterprise staff has attempted to strengthen networks and relationships by training both groups together.
- *Assessment and certification*. National examinations that cover both theoretical knowledge and practical skills as a requirement for successful programme completion exist for programmes in Egypt, Turkey, West Bank and Gaza, Jordan, Syria and Lebanon. In Jordan, there is a proposal to establish a Licensing and Accreditation Agency to be responsible for assessment and certification and that would involve a separation of training delivery from assessment.
- *Supplementary training* to compensate for gaps in enterprise training is difficult to organise effectively, but examples were found in Jordan and in Egypt.

While it appeared common during the field visits for many policy makers to criticise the quality of training within enterprises, this view appeared less common among the staff of educational institutions, and was often accompanied by a relative lack of interest by policy makers in ways of judging and improving quality within educational institutions. Resource constraints were a common concern about the quality of institutional training: teacher salaries being too low to attract enough well-qualified staff; and too little money being available for facilities, equipment and materials. In addition to problems and constraints, the study has revealed a number of initiatives to measure and improve off-the-job quality. These include institutional standards and monitoring in Israel, pedagogical training for staff in the West Bank and Gaza, and a proposal to establish a Licensing and Accreditation Agency in Jordan.

When considering quality in work-based learning programmes, there appeared to be a stronger concern in the region with inputs than with ways to assess the outcomes of training: for example through drop-out and completion rates, employment rates, the type of employment achieved, and the quality of the skills acquired during training. In some cases this can be attributed to weaknesses in the data and evaluation systems that are used to support programmes. There is a good case for improving

skill benchmarking systems in the region, as well as for developing frameworks for judging the quality of work-based learning programmes that better reflect the institutional and resource realities of the region.

While many individual initiatives can be identified to improve and monitor quality, some of the more integrated and coherent are evident in some of the very small pilot programmes in countries such as West Bank and Gaza and Syria. Steps that might improve quality include a stronger role for educational institutions in screening enterprises; developing simple tools such as log books and competency lists to guide training in the enterprise; improving links between teachers and enterprises, the use of more independent assessments; standards for evaluating and accrediting educational institutions; and improved outcome measures.

9.6 Governing Work-Based Learning Systems

Work-based learning systems pose unique challenges within the overall governance of vocational education and training systems. Governance can be thought of in terms of goals (for example quality, responsiveness and co-ordination), dimensions (for example levels, actors and roles), and in terms of the tools of governance. The discussion of governance here is organised around the tools that are used to govern work-based learning systems in the region. These are:

- *Legislation and regulation*. Quite detailed legislation to support work-based learning programmes for young people exists in Algeria, Morocco, Tunisia and Turkey, but it is less well developed elsewhere. There seems to be a relationship between how well regulatory and legislative arrangements are developed and the scale of programmes.
- *Contracts of employment and training* that have a formal legal status appear to exist in only a few cases (for example in Turkey and in Morocco's alternance programmes). Contracts of a voluntary nature exist in other cases such as programmes in Lebanon and Syria. Contracts do not exist at all in Israel and Jordan, and are not used by employers in some apprenticeship programmes in Morocco.
- *Financing systems* include not only public payments for institutional training, but also the ways in which employer and youth incentives are influenced by training wages, taxes and levies, and wage subsidies. Financial mechanisms such as training taxes to encourage employer participation in vocational training can be found in Algeria, Jordan, Morocco, Tunisia and Turkey. However, except in the case of Algeria these are often not well targeted to encourage work-based learning for young people, and they generally do not form part of a coherent overall financing system for such programmes. In some cases (for example in Lebanon, and often in Morocco), young people taking part in these programmes receive no payment. In others their payments are completely a matter for individual negotiation. Formal and regulated wage arrangements exist in Israel, but they provide weak incentives for participation. The most coherent and rational wage arrangements,

offering appropriate incentives to both employers and youth, exist in Algeria and Tunisia.

- *Data and evidence* to support and steer work-based learning programmes in the region are generally poorly developed, and where it is available is often not used as effectively as it might be. However some useful examples to the contrary were discovered in Morocco, Algeria and Jordan.
- *Co-operation and social capital* play an important but often unrecognised role in governing work-based learning systems. Formal structures for co-operation among the key actors tend to be relatively weak in the region, partly because employer organisations and trade unions are themselves weakly developed, and partly because of a centralist tradition of government decision making and programme management. Informal and local co-operation, particularly between educational institutions and employers are important, and intermediary bodies, such as the industry- and regionally-based group schemes found in Australia the regional centres of expertise in the Netherlands and local training offices in Norway can play a major role in stimulating this. One example of such an arrangement – the Egyptian Federation of construction and Building Contractors' Programme – was discovered during the study.

In considering ways of improving governance, the analysis suggests that it seems likely that greater benefits will flow from developing more coherent financial, regulatory and legal systems than from the continued development and extension of pilot programmes, particularly given that many of these do not seem to be systematically evaluated and that no mechanisms seem to be in place for communicating their benefits. Recent attempts to strengthen governance through a stronger role for employers and trade unions can be observed in Jordan and Tunisia, and a strong role in governance systems for these organisations appears to have been a long-standing feature in Turkey. The creation, with government support, of a wider range of intermediary bodies could both help to improve governance and strengthen the roles of employers and other actors in the operation and management of programmes.

9.7 Looking to the Future: Choices, Opportunities and Constraints

The challenges that face work-based learning for young people in the Mediterranean region differ among the three categories of programmes identified above. Among these challenges are: balancing growth and quality improvement; reconciling social and economic needs; strengthening links to the labour market; and improving governance systems, including the regulatory environment and financing systems. Achieving a balance between growth and quality is a key challenge given the size and growth of the youth population in the region and the levels of youth unemployment. The extent to which expansion in programme places can deliver real benefits for young people needs to be questioned in cases where non-completion rates are

high, such as in Morocco, and where the priorities for places, such as in Algeria and Morocco, is within economic sectors, such as family, agriculture and crafts, that are in decline and that are unattractive to young people. International experience suggests that there is no ideal size for work-based learning systems, and that good social and economic outcomes for youth can also be achieved by other means. If good outcomes are to be achieved through such programmes, they need to be implemented well, with an emphasis upon quality.

In addressing the challenges that face work-based learning programmes it is important to be realistic about both opportunities and constraints. Constraints include the size of national initial vocational education and training systems: increasing this might require higher quality work-based learning programmes that are targeted at higher skilled areas of the economy that lead to attractive work. Labour-market constraints exist in the form of wage fixation systems, but programmes in which the young person is a student rather than an employee might provide an opportunity to circumvent such constraints. Another labour-market constraint is the reality of competition from cheap labour arising from unemployment, migration or both.

The development of better systems of financing, regulation and governance, with the involvement of key stakeholders, will be important in both future expansion and future quality improvement. An additional factor that will assist is the development of a clearer and more coherent relationship between work-based learning programmes and other elements of the initial vocational education and training system, and among different types of work-based learning programmes.

The project has demonstrated that there are many excellent examples within the region from which participating countries can learn. There are a number of directions that mutual policy learning with the region might take. These include: developing more programmes at higher levels of qualifications, and in white collar and highly skilled jobs, following the example of Algeria; developing frameworks for assessing quality that better reflect regional realities; learning from good examples of regulatory and financing systems within the region; exploring the basis for differences among countries in the structure of programmes within similar occupation or industry sectors; and strengthening the role of intermediary bodies.

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Chapter 10
We're Here to Help: Agencies Dealing with Apprenticeships in Australia

Erica Smith

10.1 Introduction

In Australia, the institution of apprenticeship is currently very strong. This is in contrast to other countries such as the UK and Germany, where the institution has experienced difficulties because of economic recession and other reasons. 20 years ago, apprenticeships in Australia were confined to a defined number of occupations and mainly male manual workers, but the advent of traineeships (which are included, with traditional apprenticeships, under the broad umbrella term 'Australian apprenticeships') has expanded both the numbers of apprentices and the types of jobs which have contracted training associated with them. This 'success story' has been the product of very conscious planning by the Federal Government, including the introduction of new agencies to promote apprenticeships and manage their quality. These agencies sit alongside pre-existing organizations and mechanisms at the federal and state level.

This paper uses the findings from some recent research projects undertaken by the author and colleagues during the past 5 years (Smith et al., 2005; Dumbrell and Smith, 2007; Hood et al., 2007; Smith et al., in progress) to examine the role and function of the agencies that deal with apprenticeships in Australia. A critical approach will be taken: while the success of these agencies will be described, some problems will also be examined. As governments internationally seek to expand their apprenticeship systems, the encouragement and funding of agencies to promote apprenticeships is often one strategy that is considered. Hence the Australian experience is significant as the growth that has been experienced in Australia rests to a large extent on this strategy.

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10.2 Research Area

In Australia, the apprenticeship system involving 3- or 4-year contracts of training in the traditional trades has existed since first settlement by Europeans. In 1985, short, 1- and 2-year traineeships (Kirby, 1985) were introduced. Although Australian employers were slow to take up traineeships, the number of trainees rose quickly from 1995 as the federal government focused on marketing traineeships to employers. Traineeships expanded into many occupational areas that had not previously supported contacted training such as retail, tourism and hospitality (Robinson, 2001). In 1997, the traditional apprenticeship and the traineeship systems were brought together under the umbrella of the New Apprenticeship, now called Australian Apprenticeship, system, although in common usage they are usually referred to separately (Dumbrell and Smith, 2007).

The numbers of Australian apprenticeships escalated dramatically from about 120,000 in 1995 to over 400,000 by 2003, fuelled mainly by traineeship growth. Around 35 per cent are 4-year apprentices in traditional trade areas whilst the remainder were trainees (NCVER, 2004). The 'new' occupational areas tend to be where employment growth is occurring; the development of Training Packages – national sets of competency standards – for these occupational areas also stimulated growth. Completion rates remain high for traditional apprenticeships at about 75 per cent whilst traineeship completion rates are lower at about 55 per cent (Robinson, 2001).

All apprenticeships and traineeships carry with them a formal qualification, usually at Certificate III level or higher. The curriculum for qualifications for apprenticeships and traineeships consists of units of competency taken from the sets of competency standards in national Training Packages (Smith and Keating, 2003). In general, apprentices attend a TAFE college (Technical and Further Education – the public providers) or a private training provider for either one day a week or in block periods, for 2 or 3 years. Trainees may also attend college in this way, but it is becoming increasingly common for trainees to be trained 100 per cent on the job. However, even in the latter case a training provider (known as a Registered Training Organisation or RTO) must oversee the training and is responsible for the assessment and the award of the qualification. There is not usually any regulation associated with on-the-job training provided by the employer. Apprentices and trainees alike attract employment incentives for their employers. These payments are made partly at the commencement of employment and partly at the conclusion of the apprenticeship or traineeship period.

Traineeships do not enjoy the same prestige and status as traditional apprenticeships. This may be partly because in the 1980s they were viewed as a labour market programme as well as a skill formation initiative. The fact that apprenticeships have always performed the same dual function has perhaps long been forgotten. Traineeships are understood by many stakeholders to possess a list of disadvantages such as: a lower level qualification[1] with a 'thin curriculum' (Smith, 2002), a lack

[1] Although many traineeships are at higher AQF levels, this image persists from the early days, when traineeships tended to be at Certificate II level.

of off the job training (Misko et al., 2001, 166–171), a lack of close attention to on the job development (Favero, 2003), a high attrition rate and a widespread belief that many employers and RTOs only take part in the system to access government funding (e.g. Schofield, 1999; Snell and Hart, 2007). Yet on the other hand traineeships have introduced structured training to a wide ranger of occupational areas previously undeveloped, and provide pathways into higher level qualifications that were not previously available. Traineeships can provide valuable training that benefits both individuals and employers (e.g. Smith et al., 2005) and the existence of a contract of training is a strong positive influence on the quality of learning (Smith, 2004). Quality problems have been partially addressed by new policies such as the introduction of the Australian Quality Training Framework (AQTF) which aims to ensure good quality training in TAFE and RTOs by regulating the registration of training providers and the delivery of training (Smith and Keating, 2003). The AQTF is responsible for the quality of all vocational qualifications not just those associated with Australian apprenticeships. State Training Authorities are responsible for maintaining the AQTF within their states. Other initiatives introduced to address quality have included the weighting of employment incentives towards completion of apprenticeships.

The proportion of workers in Australian Apprenticeships represents 3.5 per cent of the working age population, one of the highest rates of contracted training in the developed world (Walters, 2003). This favourable picture is in part related to the strong Australian economy, which has an unemployment rate of only about 4 per cent and indeed in some geographical areas such as Western Australia and Queensland exhibiting a severe labour shortage. However, the high proportion of workers in apprenticeships is also the result of very deliberate government policies over the past 20 years. These have included the widening of apprenticeship opportunities to part-time and to mature-aged workers, and the availability of state government funding for off-the-job training by private training providers, as well as by the public provider, TAFE (Smith and Keating, 2003). This process, whereby employers, in conjunction supposedly with the apprentice himself or herself, are able to select the training provider (RTO) of their choice, is known as ‘user choice’. The funds then follow the apprentice or trainee to the RTO. User choice funding pays for the training and is separate from the employment incentive, which is paid to the employer. The availability of user choice funds to private training providers has enabled massive expansion in areas such as retail and aged care, where TAFE would not have been able to meet the demand because TAFE colleges did not have departments dealing with these occupations. In some cases, enterprises have registered to become RTOs in their own right. These enterprises are known as ‘enterprise RTOs’. A further initiative has been the development, somewhat *ad hoc*, of various forms of ‘pre-apprenticeship’ courses that enable learners to commence traditional apprenticeship training without having yet secured a job (Dumbrell and Smith, 2007).

In addition to these policies, the growth of new bodies to manage apprenticeships has been important and is the subject of this chapter. The chapter uses the findings of four national research studies (described below) to examine the effects of the

plethora of bodies involved in apprenticeships and traineeships, and to examine what might be the benefits and drawbacks of the large number of stakeholders in the system.

10.3 Methodology

The chapter draws upon four research projects that were carried out in Australia between 2004 and 2008. The majority of the projects were funded by the National Centre for Vocational Education Research, while Study 3 was commissioned and funded by the then national Department of Education, Science and Training. Table 10.1 gives a brief summary of the studies and the research methods utilized in each.

Table 10.1 The four studies providing data for the chapter

	Participants	Research method
Study 1 (Smith et al., 2005)	All enterprise RTOs (195) and a matched sample of 392 non-RTO enterprises; 12 companies covering a range of industry areas and varying engagement with qualification-based training.	Survey of enterprise RTOs and non-RTO enterprises Qualitative case studies in the 12 companies comprising interviews with managers, human resource and training staff, and workers.
Study 2 (Dumbrell and Smith, 2007)	National stakeholders in pre-apprenticeship programmes; 10 representatives of major RTOs; 1,600 apprentices in 23 enterprises; 106 students in pre-apprenticeship courses; 30 pre-apprentices in two courses.	Analysis of national data on pre-apprenticeships; interviews; surveys of apprentices and pre-apprentices; longitudinal case studies in two pre-apprentice courses involving successive interviews and focus groups.
Study 3 (Hood et al., 2007)	52 of the 160 Group Training organizations (via survey); 190 members of Group Training Organisations, industry bodies, skills councils and groups assisting disadvantaged learners (via focus groups); 25 national and state government representatives.	Survey, focus group and individual interviews.
Study 4 (Smith et al., in progress)	National stakeholders in traineeships; up to 8 industry stakeholders in each of six industry areas; up to 12 managers, workers and RTO teachers in each of 12 enterprises.	Interviews with national stakeholders in traineeships and six industry case studies each involving interviews at an industry level and two company exemplars involving interviews and focus groups.

Data from these four studies are used in this chapter to report on three major topics:

- Government bodies that look after apprenticeships;
- Other funded bodies that look after apprenticeships;
- Apprentices' and employers' experiences with these bodies;
- Functional and dysfunctional effects of the 'crowded marketplace'.

10.4 Findings

10.4.1 Government Bodies that Look After Apprenticeships

There are a number of regulatory arrangements associated with Australian apprenticeships. Contracts of training must be signed by employers, by employees (and by parents where the employees are aged under 18) and by the training provider (RTO). The contracts are registered with the State or Territory Training Authority. Employment incentives are supplied by the federal government on commencement and completion, and off-the-job training is funded by the State Training Authority. State Training Authorities and the federal government alike maintain regional and local offices where staff work to promote apprenticeships and, very importantly, to manage the quality of apprenticeships. Complaints from apprentices and sometimes their parents are handled by local offices of State Training Authorities. In addition to these long-established processes, apprenticeships are now promoted through school education systems (which in Australia are managed by state governments) because apprenticeships can be commenced on a part-time basis while students are still at school. Such arrangements have led to the establishment of new departments within State School Education Offices as well as to a large demand for school teachers that are qualified to teach vocational qualifications.

The national (federal) governments and State governments both provide finance towards VET. In fact, most State government revenue derives from the national government anyway; as State governments do not raise a great deal of revenue in Australia (for example, there is no State income tax). In the financial year 2007–8, the National Government committed $2.9 billion AUD to VET out of a total federal budget of $235.6 AUD. VET receives about one-fifth of the education budget. Funding for the State Training Authorities is decided for periods of 3 years through bilateral funding agreements which have strict performance indicators. State governments are allowed a certain amount of discretion in their VET spending. For example, they may choose to exclude certain apprenticeships or traineeships from user choice funding; quite commonly, they may exclude certain occupations from 'existing worker' user choice funding, allowing it only for 'new entrants' to companies.

Study 1 showed that national companies that had branches in all, or several, States found different regulations in different States difficult to manage. Study 2 also

indicated that different State Training Authorities and TAFE systems had different arrangements for pre-apprenticeship programmes. While this was not raised by participants as a problem, it did mean that potential pre-apprentices had more options in some States than others, and that industry areas had more effective recruitment routes in some areas than others.

In November 2007, the Howard Liberal government that had been in power for 11 years was voted out of office in favour of the Australian Labor Party led by Kevin Rudd. Under the Howard government, VET was managed by the federal department DEST, the Department of Education, Science and Training. Control over VET had been increasingly centralized under DEST; for example, the Australia National Training Authority, which had been in existence since 1994 overseeing the VET system (Smith and Keating, 2003), was abolished in 2005 and its functions brought under DEST or bodies overseen by DEST. Under the new Rudd government, VET is contained within a very large ministry (Department of Employment, Education and Workplace Relations or DEEWR) that also includes employment and industrial relations. It is yet to be seen what this may mean for apprenticeships.

10.4.2 Funded Agencies that Look After Apprenticeships

There are two sets of agencies that directly contribute to the apprenticeship system and a number of others that make an indirect contribution. The two direct contributors are Group Training Organisations (GTOs), formerly known as Group Training Companies (GTCs), and Australian Apprenticeship Centres (AACs), formerly known as New Apprenticeship Centres (NACs).

Group Training Organisations act as employers of apprentices and trainees, 'leasing them out' to host companies and thereby relieving companies both of the risk of taking on an apprentices for a lengthy period and of the paperwork associated with employing an apprentice (Hill and Dalley-Tim, 2008). Most GTOs are not-for-profit and are often industry-based, specialising for example in construction or hospitality apprentices, but some are run as commercial operations catering for a range of industry areas in a particular geographical area. There are 180 GTOs in Australia and they receive government funding as a contribution towards their operations through the Joint Group Training Program (JGTP) scheme whereby funding is allocated primarily on the basis on numbers of apprenticeships and traineeships commenced and completed. A GTO, as the employer of the apprentice, also receives the normal government employment incentive. GTOs also receive payments from the host employers, but this is usually only just enough to cover the wages that GTOs pay to the apprentices. GTOs complained in Study 3 that the JGTP funding amount is insufficient to cover the large amount of activity they undertake; many reported employing specialized workers, for example, to handle welfare issues associated with their apprentices. Study 3 found that JGTP funding is provided equally by federal and state governments, and around $20m a year flows to GTOs through JGTP. In Study 3 it was found that State governments chose to allocate funding either on an annual basis or for 2 years, and performance indicators varied from

time to time according to governmental priorities to do with industry skill shortages or encouragement of equity groups, such as indigenous people or women in trades that were traditionally male. Some GTOs complained that these short-term and shifting funding arrangements meant they could not plan ahead; other GTOs diversified their operations so that they were not so dependent on JGTP funding. In other cases they 'cross-subsidized' apprenticeships and traineeships so that, for example, host employers were not charged much for school-based apprentices but were charged more for the more 'popular' third-year apprentices. GTOs were found in Study 3 to provide an important role in supporting and counselling apprentices and trainees, as well as providing pre-employment training for applicants that did not have sufficient employability skills. They also helped with access to literacy and numeracy support and to financial support services. In addition, they provided professional development for employers, keeping them up to date with developments in the national training system and with industry developments. In many cases this was done informally through barbecues and breakfasts. State Training Authorities reported in Study 3 that they found contact with GTOs helpful, particularly as GTOs provided a 'bellwether' function, signalling the changes in the strengths of local economies and industry areas. It was reported that, when host employers started returning their apprentices and trainees to the GTOs, it was an early warning of economic difficulties.

Study 2 indicated that a great deal of added value could be obtained by industry-based training and employment providers that provided a range of services. One example was an electrical training and employment company in Victoria that provided pre-apprentice and apprentice training, group training services, and fee-for-service professional development courses for the industry.

Australian Apprenticeship Centres (AACs) are newer than GTOs and were set up in the mid-1990s to increase the number of people entering apprenticeships. AACs market apprenticeships to potential employers and apprentices, manage the signing-up process, and make sure that appropriate employment and completion incentives are paid. They also make employers aware of special incentives that may be available for employing apprentices from disadvantaged groups, e.g. indigenous or disabled people. AACs are also expected to have a role in making sure that the employer-apprentice relationship proceeds smoothly and to report any problems to the appropriate authority, normally the local office of the State Training Authority. AACs are contracted by the Federal Government department DEEWR to provide these services, with contracts running for a 2-year period. Study 4 findings indicated that AACs were not always functioning effectively. Companies complained that they were not made properly aware of available incentives, that AACs made errors which had serious consequences, and that trainees appeared to be unaware of the function of the AAC. The executive officer of the peak body representing AACs suggested that AACs were increasing in effectiveness through networking with each other and with other intermediary organizations, but that more development work remained to be done. In Study 3, tension was revealed between GTOs and AACs; GTOs saw AACs as encroaching upon their territory and as a rival for government funding. GTOs felt that the AACs' main concern was with the employer whereas

GTOs were more evenly balanced towards the interests of apprentices and trainees as well as employers.

As well as these agencies, other agencies have some role in promoting apprenticeships. These are funded by either state or federal government and may also earn income through commercial activities. They include:

- RTOs. They have an interest in employers recruiting apprentices, because they can then access user choice funding by providing the training for the apprentices.
- Job network providers. These agencies provide an employment brokerage service (the former government employment service was privatized in the 1990s). Often, they place their clients in jobs that include a contract of training. As the labour market becomes increasingly tight in Australia, it is more and more common for unemployed people to require pre-employment training before entering an apprenticeship or traineeship.
- Industry skills councils (ISCs). There are ten national industry skills councils covering the range of Australian industry, and in some states there are state counterparts (Smith and Keating, 2003). An important part of their role is to promote apprenticeships and traineeships to industry because then there will be greater take-up of the Training Packages which ISCs oversee. In some industry areas, ISCs have become heavily involved in school-based apprenticeships to try and improve the supply of labour to their industries (Brennan Kemmis et al., 2006).

To confuse matters still further, any one organization may be at one and the same time a GTO, an RTO, a Job Network provider and an AAC. This was the case, for example, in a rural organization in Victoria, visited in Study 4.

10.4.3 From an Employer's and an Apprentice's Viewpoint

An employer may receive approaches from any or all of the above agencies, trying to persuade him or her to recruit apprentices or trainees. The agencies will each describe the benefits available by recruiting apprentices, although as was made clear during Study 4, AACs are the only bodies that are officially authorized to explain available benefits. RTOs will generally approach enterprises only when they are trying to 'sell' contracts of training for large numbers of workers; for example RTOs may provide enterprises with details of the financial benefits that accrue from employment incentives if new and even existing workers are placed onto traineeships. Study 1 indicated that many if not most RTOs (TAFE as well as private) market their services quite aggressively to employers often using a 'bottom line' argument. The bottom line calculations often incorporated the employment incentive funds as well as the user choice funds. The government department DEST (now DEEWR) indicated during Study 1 that it was quite acceptable to their officers if the employment incentive funds were used in this way, or if funds provided for one group of workers were used to cross-subsidize training for other workers.

Employers will also see newspaper and television advertisements promoting apprenticeships, placed both by the government department DEST (now DEEWR) and by local GTOs.

Would-be apprentices and their parents (if of an appropriate age) may receive advice from school (in the case of school-leavers), careers services, and employment service providers. They may also approach GTOs or may see vacancies in newspaper advertisements placed by GTOs. Study 2 indicated that word of mouth was very important within certain industry areas. For example in the State of Victoria, entry into an electrical apprenticeship was really only possible after completing a pre-apprenticeship, and pre-apprentices interviewed in Study 2 said that they had received this advice from many different quarters. When an apprenticeship is gained, the AAC will manage the sign-up, but this may be the only involvement of the individual apprentice with the AAC. Should difficulties arise during the apprenticeship, the apprentice or trainee will seek assistance from the GTO if he/she is employed by a GTO, or from the State Training Authority's local or State office.

10.4.4 Functional and Dysfunctional Results of the Crowded Market

The sheer number of agencies funded to market and maintain the apprenticeships system indicates the importance attached to contracts of training by the Australian Government. Apprenticeships and traineeships are seen as very important both to expand the skills of Australian workers and the skill base of companies, and to provide secure employment particularly for young people. The numbers of agencies operating to this end mean that few employers or individuals are unaware of opportunities. They also ensure that if an employer or individual is unhappy with the advice or services received from an agency there is usually an alternative. Employers may lean heavily on the appropriate agency for advice and assistance. For example Study 3 revealed that an electricity supply company that had previously abandoned its apprentice programme, relied on a GTO to rebuild the programme until it had the corporate knowledge to stand on its own feet again. Studies 3 and 4 both showed that the federal and state governments rely on information from the different agencies to gain a good picture of the operation of apprenticeships and traineeships.

However, there are some drawbacks. All of the studies showed that employers may become confused by the different approaches and are not sure which agencies have the ultimate authority. One respondent in Study 4 said, 'Some employers say that there's just too many of you, too many payers. There's always someone new walking through the door.' Moreover, because many agencies receive performance-based funding, there is a perception that advice given to employers and to individuals may be biased. The agencies are naturally concerned to maximize or at least maintain their income, or their contract with the government, and their interests may not necessarily coincide with those of the employer or the apprentice. Study 1 showed that employers more experienced with negotiating the national

VET system were able to draw information directly from national and State agencies, while less experienced employers relied heavily on advice from local agencies. The latter strategy was less effective. Agencies also complained that others are encroaching on their territory, with demarcations quite unclear in some cases.

Where one organization is funded to provide several functions, as in the example of the multi-function rural organization in Victoria in Study 3, there is potential for conflict of interest. For example, the Job Network section of the organization would receive a payment should it place an unemployed client as a trainee with the GTO section of the organization; the GTO section would receive an employment incentive, and could refer the trainee to the RTO section for his or her training, so that the RTO would receive the user choice funding. This way, the organization receives three slices of government funding, in addition to any extra payments should the client be, for example, indigenous. While there are formal processes in place to guard against conflict of interest, perceptions of unfairness persist. However, from the client's point of view, the co-location of services may be very helpful; for a person of low self-esteem it may be attractive to have to deal only with one organization, and may therefore lead to a good employment and training outcome. Many clients of this organization were indigenous Australians, and the provision of seemingly seamless services was reported to work well for them.

10.5 Conclusions for VET Practice and VET Research

This brief paper has provided an overview of the bodies and agencies that help Australian people to find apprenticeships and employers to find apprentices. The story of the past 20 years is one of heavy investment by governments in the apprenticeship system. It may be argued that the investment has been excessive for the outcomes achieved and that from a public policy point of view there is a lot of 'deadweight' in the system. However the author's extensive research with the agencies described and with employers and apprentices indicates that there is a great deal of goodwill among most of the players and that employers and apprentices alike benefit from the intervention and monitoring undertaken by the various agencies. But there is some lack of clarity among users of the system about the relative roles of the different players.

VET practitioners need to be aware of the confusion among the users of the system – current and potential apprentices, and employers – and to ensure that participants and potential participants are given clear and accurate information. Ethical business practice is important; the financial incentives available to different agencies demand a greater attention to ethical practice than is, perhaps, currently the case. This implies that qualifications for VET practitioners should contain components on ethical practice. There is a need for a great deal more research into the operations of apprentice-related agencies; there is very little scholarly work in this area and the body of work described in this chapter forms only an initial exploration of the area.

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Chapter 11
Apprenticeship in the United States: Patterns of Governance and Recent Developments

Robert I. Lerman

11.1 Introduction

Concerns about the skilled work force remain high on the political and policy agenda of the United States. Despite the solid performance of the US economy since the early 1990s and a low aggregate unemployment rate, many Americans worry about the quality of schooling and the preparation of young people for jobs and careers. US students and workers appear to underperform their counterparts in several other developed countries on tests of international reading, math, and writing skills. Young people not going on to college have experienced difficult transitions from high school to career-oriented jobs. The wage gap between high school educated and college educated workers has widened sharply; compensation actually declined for high school dropouts over the 1980s and 1990s. The worsening job market for African-American men with no more than a high school degree is weakening their ability to start and maintain families.

Today, the intensification of global competition poses a threat to workers at all levels. Concerns are growing about immigration, outsourcing, and the expanding labour force in India, China, and other less developed countries whose workers are now a part of a world labour market (Freeman, 2007). Trade and the dynamics of companies generate worker displacement, with frequent earnings losses when workers move to other jobs. The shares of US workers with a high school diploma and with a college degree are no longer the highest in the developed world. According to the New Commission on the Skills of the American Workforce (NCSAW, 2007), 'People who prefer conventional work environments are likely to see their jobs disappear.'

Economic analyses indicates that rising wage inequality partly results from the increasingly important role of skills that were required to complement rapid technological changes, such as those embodied in computers. Another reason for the

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rising demand for skill is changes in the organization of work that were giving non-supervisory workers more responsibility for decisions and for achieving high quality (Murnane and Levy, 1996). Employers report difficulty in recruiting workers with adequate skills; over half of manufacturing firms reported that the shortage of available skills is affecting their ability to serve customers and 84 per cent say the K-12 school system is not doing a good job preparing students for the workplace (Deloitte Consulting, 2005).

Apparently, the demand for skill is rising faster than the supply. The gap between college graduate workers and workers with only a high school diploma rose from 34 per cent in 1979 to 56 per cent in 2005.[1] While expanding the skills of the current and future US work force may not be sufficient, most experts see raising educational attainment as necessary for a future of good jobs.

The common solution recommended by range of policy researchers and political leaders is to upgrade and extend formal education. Currently, the share of a youth cohort not completing secondary school within the 4 year norm may be as high as one-third. In addition, many high school graduates perform poorly on standardized tests of their writing, math, and science skills. Although a high share of high school graduates starts a 2-year or 4-year college programme, dropout rates are high. For a recent cohort, about 40 per cent complete a 2-year or 4-year degree by their late 20s.

Policymakers have largely ignored expanding apprenticeship as a means of raising skill, productivity and wage levels of a significant fraction of the US work force. In part, this is because apprenticeship has a very low profile; there is little knowledge of apprenticeship in the US. Yet, while the US trains only a modest proportion of its work force through apprenticeships, the absolute numbers of apprentices are substantial relative to other, long-term training approaches. Under the registered apprenticeship programme mandated by law and regulated mainly by the federal government, nearly 450,000 workers receive apprenticeship training. Although not recognized officially by the US Department of Labor (USDOL), some unregistered positions that involve coordinated work-based and school-based training may nonetheless be called apprenticeships by many workers and firms. In 2006, about 1.5 million individuals in the US National Household Education Survey reported having participated in 'a formal program in the 12 months prior to the interview that led to journeyman status in a craft or trade' (O'Donnell, 2005). Still, only a modest number of US workers are trained in apprenticeship compared to over 17 million who receive training and education in colleges and universities.

This paper undertakes two main tasks. The first is to place US apprenticeship within the context of the broader system of job training and skill preparation. The second is to report evidence on two research questions: (1) What is the impact of

[1]These are differences in log wages based on tabulations in Table 3.17 from *The State of Working America 2006/2007* and accessible on the Economic Policy Institute web site as http://www.epi.org/content.cfm/datazone_dznational.

apprenticeship on the earnings of trainees? (2) How do employer sponsors perceive the value of US apprenticeship programmes?

11.2 Apprenticeship in Context

Formal skill preparation for careers takes place almost entirely in school settings. At least 10 years of schooling is the common experience of every American growing up in the US Spending on the nation's educational system at all levels is nearly $1 trillion, or about 7.5 per cent of GDP. As of fall 2005, enrolment reached over 72 million students, of which 55 million were in elementary and secondary schools and 17 million were enrolled in a postsecondary school.

Students often take a vocational programme alongside academic programmes. Some students attend a regional vocational school part-time for vocational courses while continuing to take their academic courses at their home high schools (Silverberg et al., 2004). Some Career and Technical Education (CTE) courses are not occupationally-oriented but deal with family and consumer education and general workforce preparation skills, such as basic computer skills and learning about the job market (Levesque, 2003). The occupational fields vary widely, from business and marketing, to health care and computer occupations, to food service and hospitality, and to construction, printing, and transportation careers. Students in vocational concentrations (three or more courses in a broad occupational field) are increasingly taking a solid set of academic courses as well.[2] But, vocational concentrators have declined over time.[3]

Conventional high schools sometimes relate to the job market through work-based learning counted for course credit under general programmes or cooperative education. General work experience involves work for course credit that is not connected to a specific occupational programme pursued in school. Cooperative education allows students to earn school credit for work related to an occupational programme. Schools help place students in jobs that involve supervision by the teacher and employer, with employers evaluating students for their work-based learning and accomplishments. Work for class credit increased over the past two decades, from about 27 per cent of students in 1982 to 32 per cent in 1998.

While CTE has declined in importance, alternative approaches, such as Career Academies and Tech-Prep, have emerged to try to bridge career-focused learning with academic learning. Career Academies are high schools organized around an occupational or industry focus, such as finance (22 per cent), information

[2]In 1990, only 19 per cent of students with a vocational concentration completed the "New Basics" program of academic courses (4 years of English and 3 years of math, science, and social science). By 2000, 51 per cent of vocational concentrators did so.

[3]The share of students who were occupational concentrators dropped from nearly 34 to about 25 per cent between 1982 and 1990 and remained at the lower rate through 2000. Seniors who were occupational concentrators and took at least one advanced course in the occupational field declined from 24 to 14.4 per cent of all seniors from 1982 to 1998.

technology (14 per cent) and hospitality and tourism (12 per cent). The over 1,588 academies try to weave related occupational or industrial themes into a college preparatory curriculum. Students take two to four classes a year in the Academy taught by a common team of teachers, and at least one course is career- or occupation-focused. Academies attempt to use applied learning in academic courses as well as career-focused courses. They try to form partnerships with employers and local colleges. However, work-based learning in real jobs is not emphasized and many students do not experience long-term internships or jobs.

Tech-Prep programmes build integrated sequential courses of study involving high school and community college programmes. Agreements between institutions allowed some courses taken in high schools to count toward a 2-year associate's degree. As of 2003, about 1,000 consortia involving high schools and community colleges were operating, mostly coordinated by community and technical colleges and involving at least articulation agreements allowing the transfer of high school credits. Tech-Prep participation increased substantially from about 173,000 in 1993 to over 1.2 million in 2001 (Silverberg et al., 2004). But these figures may overstate concentrators since some students report being in Tech-Prep having taken only one vocational course that has transferability.

Skill development through postsecondary education takes place mostly through 2-year and 4-year colleges and universities. Even in BA programmes, about 60 per cent of students are in programmes with a career orientation, such as engineering, accounting, or other business fields, teaching, and health care. Most of the over 1 million degrees earned at schools providing degrees in less than 2 years are in some occupational specialty. In the 2003–2004 academic year, almost one in four of these sub-baccalaureate degrees is in the health care field. Another 13 per cent obtained a degree in a business related field and 15 per cent graduated in a computer-related, engineering-related or security field. Not all these sub-baccalaureate vocational students are young. As of 2000, 56 per cent were age 24 or older and 34 per cent were age 30 or older. Still, younger people recently transitioning from high school made up more than half of those entering associate's degree or certificate programmes. Enrolments in vocational associate degree programmes have increased substantially since the 1980s but have levelled off in recent years.

Some students use for-profit proprietary vocational schools for their career-focused education and training. Although national data on enrolments and numbers of schools are limited, there is considerable evidence that millions of students enrol in proprietary vocational schools (Cellini, 2006). The occupational and industry programmes operating in proprietary schools are often similar to programmes at community colleges.

Another route to obtaining skills is through job training financed by several federal government agencies as well as state governments and private foundations. These programmes offer initial preparation for the workforce as well as retraining of adult workers. Usually, the goal is to help specific groups, including at-risk youth, displaced workers especially those losing their jobs because of imports, workers with some disability, senior citizens, migrants and farm workers,

and workers who had been on welfare programmes. Among the programmes under the US Department of Labor (USDOL) are dislocated worker, adult, and youth programmes under the Workforce Investment Act (WIA), the Job Corps, Trade Adjustment Assistance, and Veterans programmes. Other examples of job training programmes with federal funding include YouthBuild, a programme providing construction work experience and training to at-risk youth, vocational rehabilitation, grants for training for recipients of Food Stamps and of the Temporary Assistance for Needy Families (TANF). The administration, oversight, and operation of these programmes vary. WIA provides money to state and local entities which, in turn, set up One-Stop centres that provide employment placement services and contract for training with various providers, including community non-profit organizations or larger organizations, such as STRIVE and Goodwill Industries. In contrast, Jobs Corps is managed by the federal government, using competitive contracts with companies that operate Job Corps centres. Often, funds provided through federal job training programmes pay for courses at community colleges or other established educational institutions. The scale of federally sponsored training programmes is relatively small, probably no more than about $5 billion per year.

The Armed Forces is arguably the largest training organization in the US (Lawrence, 1994). The military trains tens of thousands of military personnel in such fields as health care, electronics mechanic, auto repair, and trucking. Trainees learn skills that apply to their current employer (the military) but in many cases the occupational competencies learned have civilian applications. However, some skilled workers exiting military face certification and licensure problems in transferring their skills (Dyncorp, 1998).

Outside the educational system, the largest amount of training takes place through employers in formal workplace programmes and in informal, on-the-job training (OJT). As of the late 1990s, over 70 per cent of employers provided workers with some amount of formal training (Lerman et al., 2009). Although estimates vary, between 35 and 65 per cent of workers received some formal training. Nearly all workers receive some informal training as well, including 95 per cent of workers in firms with 50 or more employees. The training varies from a few days to intensive and multi-year apprenticeship training. Employer-led training is rarely intensive enough to prepare workers for specific occupational careers, but they usually upgrade the skills of existing workers.

Apprenticeships account for a small share of initial skill preparation, but the numbers have been increasing rapidly in recent years. Between 1997 and 2003, the number of apprentices increased by 25 per cent increase nationally (Bennici et al., 2004); North Carolina doubled the number of apprentices since 2000. Currently, the number of individuals receiving training in apprenticeship per year is about as high as the combined number of participants receiving training through the Workforce Investment Act's Adult and Dislocated Worker programmes, the Job Corps, and the Trade Adjustment Act. Yet, federal training outlays for these Department of Labor programmes were about 70 times the total outlays of the Office of Apprenticeship (Mikelson and Nightingale, 2004).

Apprentices in the US are typically in their late 20 s, several years older than typical apprentices in other countries. They are often recruited by their current employers to take part in skill upgrading that can provide skills in demand. Employers report that their own employees are the most frequent source for finding apprenticeship applicants.

The Office of Apprenticeship (OA) within the Employment and Training Administration (ETA) of the US Department of Labor oversees the US system for certifying and regulating apprenticeships. Potential sponsors of apprenticeships may be individual employers, groups of employers, or joint union-employer groups. They design the content of the training, organize and manage the activities, and register the programmes through the federal OA or with a state apprenticeship agency (SAA) recognized by the OA in 26 states. Unfortunately, some state agencies do not take much responsibility; they allocate few resources to servicing apprenticeship sponsors or expanding the programme.

The US system is highly decentralized. On average, the typical programme has only about 15 apprentices, with perhaps four or five starting each year. In addition, programme sponsors are usually not bound by externally developed industry standards for determining the skills taught the nature of work-based learning, the specific content of classroom instruction, and the tests of competencies. Often, the content of the programmes is developed by individual firms, with more or less coordination with the national office. This approach contrasts apprenticeship programmes in other countries, which rely on representatives of industry, workers, and government to set minimum skill standards and to provide external tests of competencies. Even in the United States, however, apprenticeships offer minimum standards in apprenticeable occupations and occasionally use external competency-based assessments. The firm-based nature of programmes is one reason apprenticeable occupations are narrower and more numerous (about 850) than is the case in countries with much larger apprenticeship systems. Another reason is the OA's lack of resources in rationalizing the existing mix of occupations into a well-designed structure of modern occupations with the appropriate amount of breadth.

The responsibilities of the OA include issuing certificates of completion to apprentices, protecting the safety and welfare of apprentices, providing guidance and technical assistance to programme sponsors, monitoring programme equal opportunity plans to prevent discrimination against women and minorities, and expanding the use of apprenticeship by employers. Unfortunately, the budgetary resources are minimal in relationship to these responsibilities. As of 2007, only about $20.8 million was allocated to the OA, almost all going for salaries. Changes in the budget reflect a sharp reduction in capacity. Between 1977 and 2007, the inflation-adjusted budget has declined by about 50 per cent and the number of workers dropped from 462 to 139 while the US labor force increased from 92 to 145 million.

Despite severe budget constraints, the OA has embarked on initiatives in selected industries and with selected national employers, and new approaches to certification. For four industries, nursing, information technology, geospatial, advanced

manufacturing, the federal government funded projects to create new apprenticeship standards. The Council for Adult and Experiential Learning produced a Nursing Career Lattice Programme that involves apprenticeship in Certified Nursing Assistants, Licensed Practical Nursing, and Registered Nursing. The Computing Technology Industry Association (CompTIA) received a grant to expand the National Information Technology Apprenticeship System (NITAS).

In proposed regulations issued in December 2007, the OA specified rules aimed at broadening the appeal of apprenticeship. The first involves widening the scope for using competency-based standards instead of relying only on standards that require a minimum number of hours of relevant work experience. The second is to recognize selected shorter apprenticeship programmes by awarding 'interim credentials.' Currently, interim credentials are part of the nursing apprenticeship programme already operating in a number of hospitals. A third change is to expand the role of reciprocal recognition of standards that have in the past varied by states. Under the proposals, all registered apprentices would have their credentials recognized throughout the US. A fourth effort is to expand linkages between apprenticeship and other parts of the job placement and training system.

11.3 Evidence on Earnings Impact of Apprenticeship in One State

Few studies have tried to estimate the impact of apprenticeship on the earnings of apprentices. Impact studies try to examine the difference between the earnings of apprentices and what their earnings would have been had they not participated in an apprenticeship programme. In the absence of an experimental study – in which entry into apprenticeship is determined on a random basis – it is difficult to be sure that following a comparison group accurately captures what the earnings of apprentices would have been. The reason is that workers with similar observed characteristics may differ on an unobserved characteristic, such as motivation, that predicts both entry into apprenticeship and subsequent earnings, whether or not the individual enters an apprenticeship.

A study of apprentices in the state of Washington used a comparison group of workers with similar characteristics as apprentices, including the same pattern of earnings in the pre-programme period. To the extent that actual earnings before the programme incorporates the unobserved characteristics relevant to success in the labour market, the comparisons should reflect the earnings differences associated with apprenticeship relative to participation in other programmes.

Using this comparison group, researchers from Upjohn Institute found that the gains associated with apprenticeship training in Washington were substantial two to 3 years after leaving the programme (Washington State Workforce Training 2004). Those leaving apprenticeships in 1997–1998 (whether or not they completed the programme) earned about $2,000 per quarter more than the primary comparison group in the 1991–2001 period. Those completing apprenticeships earned nearly

$4,300 more. The earnings gains to apprenticeship completers are nearly three times the comparably estimated gains for those graduating with a vocational degree from a 2 year college. Among those with any participation in apprenticeship or community college, the earnings gains are twice as high for apprenticeships. higher earnings gains for apprenticeship relative to participating in a 2-year college is especially impressive because government costs are minimal for apprenticeships and are substantial for entry workers entering a 2-year college.

On a lifetime earnings basis, gains to apprenticeships were 25 per cent higher. The earnings gains associated with apprenticeship came largely from increases in wage rates and from employment in construction and manufacturing. Overall employment among apprentices was 5 percentage point higher level of employment than among those comparison groups. It is noteworthy that the earnings gains linked to apprenticeship were very high; despite the fact that only about 35–43 per cent of those starting apprenticeship completed their programmes.

These results offer evidence of highly positive impacts of apprenticeship in the US However, additional studies will be required to persuade the research and policy community that apprenticeship training is valuable for workers. What about the suppliers of apprenticeship training? We now examine how employer and joint employer-union sponsors perceive the value of apprenticeship as a method of attracting and retraining skilled workers.

11.4 What Apprenticeship Sponsors Think

In early 2007, the OA sponsored a study of registered apprenticeship sponsors to learn about what motivates and troubles sponsors; what they value, dislike, or would like changed; what they see as the main benefits and costs of apprenticeship; the types of data they maintain on apprentices; and their contacts with the One-Stop Centres in regard to apprenticeship. To capture this information, the OA worked with contractors to design and field a nationally representative survey of apprenticeship sponsors. Sponsors can serve either one or multiple employers, and may or may not have organized labour involved in their programme.[4] Most sponsors surveyed had registered apprenticeship programmes that served only one employer (60 per cent) and were not joint programmes (73 per cent). The survey took place in the spring of 2007 and yielded 947 completed interviews.

The industry in which registered apprenticeship programmes operate is crucial to the success and growth of registered apprenticeship. In construction, the use of apprenticeship as a training method for new workers is widespread. However,

[4]Registered apprenticeship sponsors were asked in the survey if organized labor was involved in their program. Those sponsors that responded ‘yes’ are referred to as sponsors of ‘joint’ programmes in this report.

because apprenticeship is new to many industries such as health care and information technology, penetration of registered apprenticeship is only in the beginning stages of growth. According to one study, the number of registered apprenticeship programmes in energy more than doubled from 1995 to 2003 and the number of programmes in social services (e.g. child care) almost quadrupled from 1995 to 2003 (Bennici et al., 2004). The number of active programmes in these industries that are newer to apprenticeship is small compared to industries such as construction, but has expanded rapidly. However, registered apprenticeship programmes in health services decreased slightly and information technology remained relatively flat over the 1995–2003 period.

About 42 per cent of sponsors in the survey were in the construction industry. Apprentices from construction programmes made up nearly three quarters of apprentices in the sampling frame. About 60 per cent of sponsors who participated in the survey had registered apprenticeship programmes that served only one employer. Only about one-fourths of sponsors were joint union-management programmes.

The results of the survey indicate a high degree of approval of apprenticeship. Nearly 87 per cent of sponsors report they would strongly recommend registered apprenticeship and another 11 per cent would recommend apprenticeship with some reservations. Only about 2–3 per cent answer that they would not positively recommend apprenticeship. Nearly all sponsors report that the apprenticeship programme helps them meet skill demands. Other important benefits of apprenticeship noted by sponsors include reliably documenting appropriate skills, raising productivity and worker morale, and reducing safety problems. Only 5–8 per cent do not find these benefits of apprenticeship at all important. While saving money on wages was less important than other factors, about one-third of sponsors said it was very important and another one-third said this aspect of apprenticeship was somewhat important. These savings offer a way of recouping at least some of the employer costs of investing in apprenticeship. If wage savings are sufficiently high, employers may be able to break even as they finance apprenticeship training.

Sponsors report high completion rates. For 44 per cent of sponsors, completion rates for their programmes are 90–100 per cent. These high completion rates are especially common in the aerospace, automotive manufacturing, energy, health services, retail, and transportation industries. Sponsors (36 per cent) often point to personal issues as a main reason for non-completion over other reasons in the survey. Performance problems are the next most commonly cited reason for non-completion. The dropout problem is viewed as significant by over 20 per cent of sponsors. But only 11 per cent of sponsors mention significant problems with other issues.

Almost 30 per cent of the survey respondents say non-completion is due to apprentices earning a craft license and then taking another job before completing the programme. Nearly 11 per cent of sponsors see transferring to another apprenticeship programme as a main reason for non-completion of their programme. These factors are particularly important for sponsors in the construction industry.

Until recently, human capital theory predicted that employers are unlikely to finance general training because the workers capture all or nearly all of the associated gains in productivity. With added general skills, workers become more attractive to all firms and can thus command a higher wage. The fear that others will 'poach' and hire away their workers after they receive training is thought to deter employers from providing the type of general training embodied in apprenticeship. Instead, employers theoretically have an incentive to invest only in firm-specific training.

One challenge to this view is that employers have an incentive to fund general training because transaction costs in the labour market make it difficult for workers to quit and costly for employers to replace them (Acemoglu and Pischke, 1999). Also, firms providing the training know more than other firms about the content and value of training and how well individual workers absorbed the knowledge. Firms realize that specific and general skills are often complementary – the ability to achieve high productivity gains from specific training increases the productivity of the worker's general skills. Still, another issue is that general-specific distinction downplays the critical role of occupational skills, which are general in the sense of having value to more than one firm but which are specific to a set of firms.

The survey of apprenticeship sponsors offers a practical window into what some employers say about the delivery of general and firm-specific training through apprenticeship and what they value in the programme. The key question asks sponsors to report whether they think a potential effect of apprenticeship is a benefit and whether the benefit is 'very important,' 'somewhat important,' or 'not important.' The list of potential benefits included items on recruitment and retention, skills attainment, productivity, employee morale, and safety, among other things. Surprisingly, only about one-quarter of sponsors regard poaching as a significant problem. In fact, 46 per cent of sponsors view poaching as not a problem at all and another 29 per cent perceive poaching as only a minor problem.

The survey evidence reveals only moderate involvement with the broader US public workforce system. Over 70 per cent of sponsors report no interactions with local Job Service or One-Stop centres; only 17 per cent said they use a One-Stop or Job Service to post apprenticeship openings and 16 per cent report having applicants sent by the One-Stop or Job Service. Recruitment from existing employees is the most common method.

The provision of related instruction typically takes place through community colleges and technical colleges. These two institutions account for over half of all providers of related instruction. Sponsors generally give high marks to the quality of related instruction. Over 80 per cent rank the instruction as excellent or near excellent (4 or 5 on a five-point scale). Only 5 per cent (or about 50 respondents) indicate that the instruction quality is poor or near poor (1 or 2) and about 13 per cent viewed instruction as average (3). Higher quality of related instruction appears to lead to a higher per cent completing apprenticeship.

Over 56 per cent of sponsors say they were interested in learning about or how to use competency-based apprenticeship training. Middle sized programmes are especially interested in these types of programmes.

11.5 Implications for the Future

The US has great room for expanding apprenticeship. The current system, while expanding at a healthy rate, remains a modest part of the nation's overall training system. The limited use of apprenticeship is partly due to the emphasis on higher education, partly to the tiny budgets provided to promote and manage the apprenticeship system, partly to narrow range of industries with experience in apprenticeship, and partly to apprenticeship's close association with unions, which now cover a low share of the work force.

One reason for potential optimism is the growing recognition of the benefits of teaching skills through work-based learning. Others recognize that the wage progression and skills achieved through apprenticeship can expand the number of good jobs. But, by far the most important factor demonstrating the feasibility of expansion is that sponsors of registered apprenticeship express great satisfaction with their programmes. Over 80 per cent view apprenticeship as providing a very important benefit of meeting demand for skilled workers, and over 65 per cent think that raising productivity, strengthening the morale and pride of workers, and improving worker safety are very important benefits.

A common critique of apprenticeship is that firms have few incentives to provide general training because competing firms will bid away apprentices once they reach a high level of skills. Surprisingly, this theoretical problem is real and significant only for about one in four sponsors and not perceived as a problem at all for nearly half of all apprenticeship sponsors. Moreover, even among sponsors who perceived poaching as an important problem, about 85 per cent still strongly recommend apprenticeship to others.

The data suggest that existing apprenticeship sponsors could be used to help market the programme to organizations not currently sponsoring apprenticeship. Since nearly all existing sponsors say they would strongly recommend the apprenticeship concept to other employers, many could be used in marketing efforts undertaken by the Department of Labor, especially in industries with only a modest penetration of apprenticeship at this time.

Finally, developing evidence that apprenticeship is cost-effective is likely to assist efforts to market apprenticeship to employers and to persuade policymakers about the value of apprenticeship.

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Chapter 12
Comparing Two Cases of Training Practice – Implications for Trainers' Professional Development

Philipp Grollmann

12.1 Introduction

Quality learning within the company during apprenticeships is based on a number of factors (Eraut, 2004). One of them is the competence of experienced colleagues that are supervising learners on site or of trainers that are formally responsible for the learners' success. Overall, this whole spectrum of profiles is referred to as trainers even though there are different degrees to which they are actually fulfilling a formalised trainers' role or are accompanying apprentices as senior expert workers (Harris et al., 2000; Schmidt-Hackenberg et al., 1999). Therefore 'professional development' needs to be looked at in two ways: from the perspective of the training function and the perspective of the expert worker function.

12.1.1 The TT-Plus Project as the Context

The European Commission, Lifelong Learning Programme funded TT-Plus[1] project is examining the changing role and practice of training. This will feed into the formulation of principles that have to be taken into account when looking at continuing professional development of trainers. Whilst there are projects underway that look at profiles and qualifications of trainers from the perspective of how they fit into the schemas of the European Qualifications Framework (e.g. the current project[2] of CEDEFOP's TT-Net), TT-Plus looks at patterns of training practice and tries to develop ideas on how to support trainers' professional development

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[1] Cf. http://www.ttplus.org/

[2] Cf. CEDEFOP Call for Tender: AO/B/MB/VETProfessions/017/06 – 'Defining VET Professions'

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from this end. Therefore, a major challenge for the TT-Plus project is to develop a methodology for the trans-national study of the (changing) practice of trainers (Attwell et al., in preparation). An in depth view is needed for two reasons: interest in the level of practice of training and the still unsatisfactory research basis with regard to practices, profiles and qualifications of trainers (Leney and The Lisbon-to-Copenhagen-to-Maastricht Consortium Partners, 2005). A particular problem in that regard is how the practice of trainers can be studied in-depth while at the same producing results that are not just incidental snapshots of specific training practices in particular organizations.

At the end of this text we will return to the question of how far the professional development needs of trainers can be depicted through the descriptors of qualification frameworks and what alternative measures might be available.

12.2 The Cases Studied

The research presented in this contribution compares two cases of training practices and outlines the implications that empirical findings from these cases have for considerations about the support of trainers' professional development. The two cases that have been looked at have been carefully selected on the basis that

1. they present examples of 'good training practice'. This was done based on the criteria that had been developed for the selection of cases in the INAP project (Grollmann and Rauner, 2007) and that were further developed into the QEK-Tool (see the chapters 15 by Rauner et al., this volume), and
2. they are typical but contrasting cases of such practices for the German environment of in-company VET: in this contribution we especially draw on two cases. Each represents training in the field of electronics occupations, one in an industrial plant environment and one in an SME based on the tradition of a family business that increasingly expanded over the last 50 years up to an international company of about 300 employees.

In light of the threats to which dual vocational education training is exposed they provide rich contrasting examples of significant dimensions of realizing in-company vocational education. There are a number of critical issues when it comes to the realization of the in-company part of VET in the German Dual system. Two significant issues are the costs of apprenticeship and its quality.

12.2.1 Costs

Over the last years there has been a constant mismatch between numbers of applicants and vacancies, e.g. in 2004, 580.000 apprenticeship vacancies were matched

by 660.000 secondary school graduates looking for an apprenticeship. There is a general adverse trend as regards to this relationship.

It has been argued that one reason for the observable reduction of apprenticeships might be that the incentive to take on apprentices as a kind of long-term HRD commitment (Franz and Soskice, 1994) is increasingly vanishing because of the on-going flexibilisation of the labour market. Such kind of economic calculation will be much more apparent in SMEs than in bigger enterprises that are more flexible with regard to future HRD investments and can rely on economies of scale to a larger extent than SMEs. There are some public policies aiming at increasing the willingness of companies to take on apprentices, such as an apprenticeship bonus payment. Another measure with direct relevance to trainers is the temporary abandonment of the minimum qualification for trainers that is part of the federal vocational training law.

12.2.2 Quality in the Dual System

In such a framework it is also easily conceivable that quality in terms of content and form may vary between the different occupations and companies despite the existence of uniform federal training regulations and infrastructures for approximately 380 occupations regulated by the Vocational Training Act (*Berufsbildungsgesetz*, BBiG). Dual vocational education is based on private employment contracts executed by trainees and training companies. As institutions of self-administration for the enterprises, the responsible Chambers are responsible for the appropriate structuring of these employment relationships in accordance with the Vocational Training Act and, based on that law, the various training regulations stipulate the content and quality of training for the respective occupation. On execution of a training contract, part-time vocational schooling is mandatory. Instruction at the vocational school is based on a basic curriculum drawn up by the *Bundesländer* on the basis of a recommendation by a commission of the Permanent Conference of Education Ministers, the so-called framework plan. According to the training regulations (in-company vocational training) and the curricula (for vocational schools), dual vocational training directed at the occupational profile occurs at both venues of learning. To a certain extent, enterprises are allowed to take into consideration company-specific contents and interests in their training. In addition to occupation-specific lessons, vocational schools offer a more or less comprehensive range of instruction in general subjects such as German, political science, and English. The time spent at the vocational school during dual training amounts to between 8 and 12 instruction hours per week. Instruction is increasingly structured in so-called *Lernfelder* that go beyond classical curricular subjects. With this cross-curricular orientation the curriculum is geared to professional tasks within the respective occupational family. It is rather an exception that vocational schools and enterprises or teachers and instructors co-ordinate the subject matter involved in school and enterprise-based training. Usually bigger companies are more likely to co-ordinate – not least because of the number of trainees – than smaller companies.

12.2.3 Summarizing Characterization of the Cases

With regard to the two the key dimensions 'quality' and 'costs' the two cases are typical cases of 'good practice', since they share a good balance of the two on a comprehensive basis. However, with a finer grained look some differences can be found that are representative of some of the distinctions that can be found in German VET. The first company is an SME based on the tradition of a family business. The staff development in the company is based on a gradual insertion process of young workers into the business and work processes under supervision of the masters of craft and trade (*Meister*) and advanced skilled workers (*Gesellen*). The role of the Meister is to allocate advanced skilled workers and trainees to different worksites and service visits. The skilled workers are at the same time considered as worksite mentors who are responsible for promoting the learning of trainees. In the company B (a large industrial plant) there exist separate training workshops that take over a large amount of the learning support within the on the site training periods of the apprentices. All in all the larger company has higher training costs than the small company but is also pro-active in generating co-operation between the vocational school teachers and the in-company training staff that is often lacking in smaller companies. The cases can be assumed to be typical examples with 'theoretical representativeness' (Kluge and Kelle, 1999) of in-company training within the industrial variant of the electro-technology technician occupation (there also exists a profile that is geared to the crafts sector) within the dual system. Some further differences will be uncovered in the sections below. As a common denominator for our empirical work we have devised a framework that helped us to direct our research on a shared basis.

12.3 An Open but Focused Lens on Trainers' Practice

It has been argued in many places that ethnographic paradigms often do justice to the complexity of practice but eventually end up in a 'doubling' of reality. This problem had to be tackled in our TT-Plus project. Thus, we needed an analytical framework that helped to bring the strengths of this approach to the forefront. Such a framework needs to provide certain criteria at hand for the selection of empirical instances as well as for their interpretation. At the same time it needs to be 'lean' enough to give sufficient room to and acknowledge the local contexts in our transnational and trans-sectoral design, the actual problems and the strategies how to cope with them. 'Practice' carries two meanings with regard to the reality of our target group. On the one hand the trainers themselves can be regarded as experts on learning and training at the workplace. On the other hand workplace trainers are experts on the 'local knowledge' of work processes, tasks and functions. Training workers exhibit, develop, transfer and convey the knowledge useful at work, i.e. the so-called work process knowledge (Boreham et al., 2002). This double practice orientation makes it a valuable undertaking to take a deep look into trainers' practices. The double practice orientation of training has certain repercussions on the

way we can examine to what extent the existing mechanisms and contents of training provision and requirements are aligned with the immediate needs of persons taking over learning support functions within work processes (our target group). How far do existing 'train-the-trainers' provision, policies and practices and the way of their recruitment correspond to the 'internal logic of training' at the workplace? Based on this overarching question we need a common understanding of the elementary constituents of the process of 'professional development.' In principle it can be analysed according to different stages and with regard to different levels of analysis. A generic model of stages would distinguish at least the following elements:

1. Pre-training biography/experiences;
2. Initial take-up of training functions;
3. The everyday practice of learning support;
4. Changes and developments with regard to this role (e.g. expansion in terms of content or time; promotion etc.).

In order to be able later to make use of different case studies across the project it is necessary that we relate our findings to such a generic model. This will be especially necessary when trying to utilise the project findings to develop a framework for professional development.

Talking about professional development, it is eventually the individual trainers' competences, attitudes, skills and abilities to support the learning of novice workers that come into focus. However, since training takes place in the immediate context of work organization and its constraints, it would be a wrong and unfair attribution to look only at the individual trainers' dispositions, skills and abilities. Thus, a look at organizational practices and the interaction with learners is also needed (Eraut, 2004). This is the context in which those individual determinants of training practice can be accentuated. The focus on the trainers' role and practice and its development is necessary, since otherwise we might risk producing only general findings on the quality and processes of learning in work processes or on organizational developments as regards to learning at work, where others already have done better (e.g. Argyris and Schön, 1999; Boreham et al., 2002; Fischer, 2000; Hackman and Oldham, 1980).

At the beginning of the research project we developed an interview guideline with different questions that fit into this overall framework and that has been applied in three different perspectives. For each case there was an interview carried out with at least one learner, one trainer fulfilling immediate training functions at the work place and one person taking responsibility for training with in the company. Our research in the German team was accompanied by a Master's thesis that contributed to the gathering and first interpretation and sorting of the data (Martens, 2007).

Figure 12.1 gives an overview about some hypothesized tensions and challenges in the first row and some issues and problems that could be identified through this lens in the second and third row.

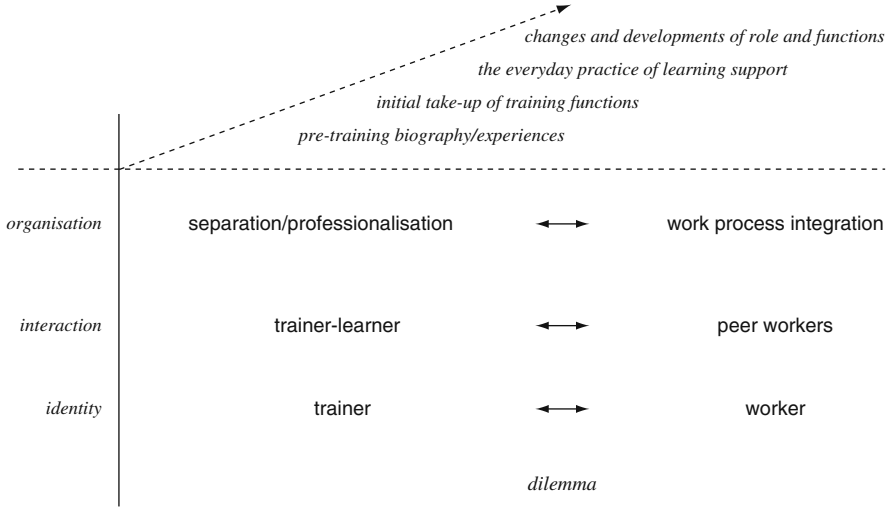

Fig. 12.1 Levels and phases of professional development

12.4 Findings and Interpretation of the Case Studies

This section summarizes the findings of the two case studies (Table 12.1) according to the different levels that have been pointed out in the analytical framework. The interviews that were carried out have been evaluated against some preliminary hypotheses that had been formulated on the basis of this framework.

12.4.1 Organizational Level

A general tension between a work process integration and professionalization measures on the other hand could be seen in our cases. In the SME based company a wish for more information and support as regards to knowledge about training practices and their structural environment was mentioned by the person with immediate training functions, one of the interviewees.

Organizationally, this demands a clear strategic view on how the learning of apprentices can be enhanced while at the same time avoiding some frictions that will be pointed out below. This includes a clear profiling of training support functions and, more importantly, the orchestration of the rotation process of learners with the learning support through mentors, trainers and training managers. Elements of such arrangements can be seen in the systematic feedback that the training manager collects from apprentices about on-the-job trainers in the case of the SME. In the industrial company, taking on responsibility for apprenticeship learners is one

Table 12.1 A hypothetical framework on the dynamics of trainers' professional development and some findings

	Pre-training biography/experiences	Initial take-up of training functions	The everyday practice of learning support	Changes and developments with regard to this role
Possible (hypothetical) problems, dilemmas etc.	Workers that are trained to become specialists and lack the necessary skills to transfer their knowledge and competence to peers and novices;	Formal recruitment policies are not aligned to the actual needs of trainers' practices: They constitute a formalistic 'pedagogisation' and do not take into account the specific conditions of learning at work Responsibility is only based on the progression of technical expertise and promotion	The identity as a worker dominates the identity of a 'learning supporter'. Insufficient commitment to learning support The identity as the trainer dominates the identity as worker. 'Instructionist' conception of learning at work	Strong commitment to learning support leads to a 'teacher-like' identity Can promotion and spatiotemporal expansion of the trainers' role be organised keeping his expertise in conveying 'local' knowledge of the production process and tasks?
Case A (SME)	Responsible for training based on the judgement of the departmental leader	Expressed wish for knowledge on training rules, curricula, etc.	(Supervising) Rotation of apprentices (as a predominant role of the training manager) Evaluation of training in the departments through apprentices (supervisor interferes in case of problems) 'Bad reputation' of training workshop ...	Introduction of the training manager as the supervisor for rotation

Table 12.1 (continued)

	Pre-training biography/experiences	Initial take-up of training functions	The everyday practice of learning support	Changes and developments with regard to this role
Case B (Industrial Plant)	'Learning support' and communication as a professional task is included as a natural feature of 'initial' training in the company, apprentices are prepared to take over functions of knowledge and competence transfer Recruitment of an external expert *Meisterausbildung* as formal requirement for trainers in the training workshop Rotating responsibility for training at the workplace		Process orientation in the training workshop as well as in the work process ('mechatronics') Co-operation and networking with other companies in order to provide apprentices with the full range of learning experiences led to the establishment profile of a 'professional networker'	Taking over training functions can be an important step and criterion for any promotion towards a profile that includes personnel responsibility (*Tagesmeister*, process engineering/planning)

of the pre-requisites for taking on higher-level organizational functions. The role of the training manager in the SME case was shifted from direct instruction into more supervising functions that co-ordinate apprentice rotation in the company. This shift also resulted in a gradual abandonment of the training workshop that was perceived as ineffective in conveying skills and competences by peer workers as well as by management. On the other hand there are also organizational practices that indicate that a full shift to learning within the work process might be deficient as well. For example, the large industrial company also employed a person from outside that takes over certain responsibility with the training process, and that is especially responsible for the co-ordination of workplace learning and school-based learning of apprentices.

12.4.2 Interaction

In both of our cases, there were complaints about the work of training workshops that pointed into this direction. Trainers and learners lost authenticity as peer workers. On the other hand, the workplace trainers and the interviewed learner in the crafts-based enterprise were complaining about certain problems that arise when trying to fulfil the training function embedded into work processes, such as time constraints and clients pressure to be served by senior skilled employees. Certain instruments and practices such as learning support evaluation sheets can help to give feedback to trainers as regards to their quality, as they are used in any case.

In the case of the industrial company, it is interesting that the concept of peer learning is also applied at the level of apprentices themselves. This leads to raising apprentices' awareness about issues of learning and co-operation from the outset of their professional development as skilled workers.

12.4.3 Trainers' Individual Development

In fact past experiences in both companies have shown that specialized trainers developed increasingly an 'instructionist' conception of work that did not take into account the immediate constraints and challenges that appear in everyday work anymore and therefore provided less authentic learning support. What we found here was not necessarily a negative opinion of learners as regards the training they had received, but a negative opinion of the worksite mentors that were complaining about the performance of the apprentices in real-world contexts, questioning the learning that took place in the training workshop. On the other hand the examples from the SME show that there is danger in weighting the need for highly effective and efficient execution of work assignments more highly than the support that needs to be provided to apprentices.

12.5 Conclusions and Discussion

The two cases supported the hypothesis that we had formulated on a preliminary basis at the outset of interpretation through the framework in principle. Quality practices of 'training' need to balance general support for learning across the company with more direct efforts to support the implementation of formal apprenticeship schemes.

12.5.1 Policies that Support Trainers' Individual Development

For the individual development of trainers, the cases show that it is difficult to apply a straightforward linear approach to the professional development of trainers that parallels a growing experience base with progression in the level of training expertise. Even though there is room for profiles that are specifically devoted to training, major parts of learning support are taken over by people doing this as an activity that takes place during the normal job activities and where the learner is a beginning peer worker.

This has different repercussions on how the professional development of 'trainers' can be enhanced. One possibility – of course is – raising the formal status of trainers and putting special emphasis on their knowledge and skills with regard to learning and managing the training processes. This could indeed be organized as a linear concept of professional development that is rooted in the work process and increasingly specializes and expands into training functions.

However, the case of the industrial firm also shows that it can be regarded beneficial by the firm to employ someone from outside who takes over such functions because of the specific networking skills and broad knowledge that this person exhibits.

12.5.2 Support for Learning

Another important way of tackling the support of learning and training on the individual level is the cultivation of learning support as a general assignment for (peer) workers during their induction into the work process as well as in later stages of their career. We have seen both cases in our industrial firm, where training skills were part of the later stages in the apprenticeship programme itself. Training was also seen as a benefit for the promotion into higher level technical positions such as process engineering.

Possible downsides to a full process integration could be seen in our craft rooted case, where there was a demand expressed from the trainers' side for more support in terms of access to individual knowledge on formal regulations and training practices. Small companies might need support for this because of limited available for such strategic training that is not immediately connected to the everyday technical needs of work.

12.5.3 What Can Research Provide in this Regard?

Research can help in identifying typical problems and challenges (across the different contexts of our study) that workplace trainers (or rather, the variety of profiles that take on responsibility with supporting the learning of apprentices) encounter during their professional development.

Such problems can be seen as the major instigators of making 'professional development' necessary and initiating. Solutions and strategies how to cope with those problems could then be taken as indicators for good practice that can be converted into benchmarks for best practices as well as an input for the design of development frameworks as well as training measures. Theoretical derivations and empirical findings accordingly will help to identify the 'typical' problems and challenges of workplace trainers' professional practice and its continuous development and improvement.

12.5.4 Policies for Supporting Training and Learning in Companies

There exists a contradictory situation: on the one hand it can be observed that, increasingly, learning is integrated into work processes (Griffiths and Guile, 2004; Leney and The Lisbon-to-Copenhagen-to-Maastricht Consortium Partners, 2005). This trend is principally appreciated through theories and research into the potentials of learning in practical environments and communities of practice (e.g. Chaiklin and Lave, 1996; Lave and Wenger, 1991). However, at the same time we want to achieve that training functions are acknowledged more formally, that the building of the necessary competences is systematically nurtured and that it becomes a part of the organization in its own right. The awareness of this overarching polarity can help policy makers and training managers to reflect on the implementation of single measures that are taken for the support of learning in companies. The constant 'test' of actions to be taken and the projection of consequences on the background of the mentioned polarity can serve as the background for a reflective practice on the level of policy and management and as a catalyst towards a coherent strategy of supporting trainers.

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Chapter 13
Facilitating Learners' Motivation and Competence Development in the Workplace: The UK Context

Natasha Kersh and Karen Evans

13.1 Introduction

Workplace learning and competence development have become important areas of research in recent years. Rapid changes in economic and social development as well as the impact of globalization have contributed to the changes in perception of adult education and workplace learning. Developing competence has become a crucial issue for achieving success in the workplace (Eraut, 1994; Hodkinson, 1995; Oates, 2004). The research has indicated that colleges of further education may play an important role in facilitating learners' skills through a range of work-related courses that aim to develop transferable skills for those who want to enter the workplace, succeed in their current workplaces or return to work after a break. In this context the issue of learners' motivation is of crucial importance.

Factors facilitating the development of workplace competences through motivation of learners/employees have been discussed in a number of papers (Malone, 2005; Unwin and Fuller, 2003; Felstead et al., 2004; Avis, 2004). There are many conditions that may facilitate or undermine learners' motivation and skills development. Drawing on our current and previous research in this area (Evans et al., 2006), in this chapter we focus on two groups of motivational factors, namely (1) factors related to learners' personalities, backgrounds and learning environments; and (2) factors related to the development and use of new technologies (e.g. e-mail, Internet, computer-assisted/on-line learning, educational software, etc.) in the context of work-based learning. The chapter discusses various factors and conditions that may facilitate the link between the college and the workplace in terms of supporting learners' motivation as they move between roles and settings. The paper considers under what circumstances the factors may stimulate learners' competence development and what approaches may be employed by supervisors/trainers in order to facilitate this process. The learning contexts can facilitate, support or

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undermine learners' motivation and competence development particularly focusing on the following aspects. Within the project we have attempted to consider, as follows:

- How (in what way) motivational factors are affected by various contexts and conditions?
- What factors could facilitate or undermine learners' competence development?
- What is the effect of the new technologies on learners' motivation and competence development?
- What approaches could be employed by or supervisors in order to facilitate the positive effect of motivational factors?

Factors that may determine motivation towards the skills and competence development have been linked to the current agenda in the area of vocational education and workplace learning. The following section will consider some important aspects of the present developments of VET and workplace learning in the UK.

13.2 Skills and Competence Development: Improving Work-Based Learning

In the last decade, one of the main concerns has been to raise the skills level of the population as a way of increasing the competitiveness of the UK economy. The new debate has highlighted the importance of development of skills required by the current demands of the labour market. Another related area of concern is work-based learning, which is also part of the strategy to increase employability and economic competitiveness. The traditional model of work-based learning was the 'one-off, pre-service education and training model' (Hodkinson and Bloomer, 2002). Thus, the traditional view of work-based learning was that it mainly consisted of qualifications or training (such as the apprenticeship model) gained prior to employment or progression in employment. This model is being challenged by the interest in 'workforce development'. What employees learn as 'learners in the workplace' and in experiences beyond the workplace (see also Livingstone et al., 2008) leads to the development of certain forms of knowledge and competence, e.g. job-specific, occupational or personal. The debate on work-related competences has highlighted the issue of the importance of developing personal competences and abilities that people can use in a variety of settings, including workplace settings (Evans, 2002).

During recent years, a number of reforms and initiatives have been launched with the purpose of improving VET for young people and adults in order to make it more responsive to the needs of both employers and individuals, in particular, in terms of skills and competence development. As Miller (2005) notes, 'the UK has moved away from a provider driven and technical view of vocational education and training to a system where employers and employees lead the way in skills development'. Factors such as low levels of productivity in the UK (linked to low levels of

skill in the workforce), low levels of participation in training, and high differentials between social groups, prompted the newly elected Labour Government in 1997 to develop strategy focused on (1) raising standards and (2) inclusion (Leney et al., 2004). A wide range of vocational opportunities is available for learners at the end of compulsory education (from the age of 16), including:

- qualifications within the National Qualifications Framework (NQF);
- other qualifications outside the NQF (e.g. RSA or City & Guilds, vendor qualifications offered by Microsoft and others);
- short training courses (not necessarily leading to a qualification);
- work-based learning routes (including apprenticeships for young people and for adults).

The MA, introduced in 1994, is a government-supported work-based learning (WBL) programme. 16 to 24-year-olds are currently eligible, but an extension of the programme to individuals aged 25 and above was announced in the Skills Strategy (DfES, 2003). The programme was first introduced at Level 3 only, but in 2001 was split into two phases – the Foundation Modern Apprenticeship (FMA) leading to NVQ Level 2, and the Advanced Modern Apprenticeship (AMA) leading to NVQ Level 3. For the majority, learning takes place both in the workplace and off-site through day or block release at a further education (FE) college or with a private training provider, although some apprentices receive no off-the-job training (Stasz et al., 2004). The revised Apprenticeships framework has a mixture of work-based training and education, which include the following basic elements:

- A National Vocational Qualification (NVQ);
- Key skills, e.g. communication and application of number;
- A technical certificate;
- Other mandatory or optional elements as specified by the particular occupation.

UK Government policy is continually reviewing vocational education and workplace training provision to meet the needs of both individuals and employers. During recent years a number of government publications and initiatives such as *The Learning Age* (DfEE, 1998) or the launch of the government's *Skill Strategy* (2003) have stressed the importance of both adult learning and the workplace as an important site of learning and emphasized the significance of the link between education and training provision and employers' demand for skills. A report from the Cabinet Office Performance and Innovation Unit (PIU, 2001) has underlined that 'the demand for what is called "workforce development" must come from employers as well as individuals.'

Developing competences has become a significant issue for facilitating success in the workplace (Eraut, 1994; Hodkinson, 1995; Oates, 2004). Learning contexts of vocational education and workplace learning may vary, including sixth-form colleges and FE colleges, school-based and community-based provision; workplaces

and training providers. Colleges of further education and adult education are currently taking an important part in developing learners' skills and competences in the context of VET and work-related learning. The project collaborated with a college mainly concerned with adult learners to get an insight on how the learners' motivation could be developed in the context of work-related learning environments. The next section will provide an outline of the methodology.

13.3 Methodology: The Context of Research

The study draws on both theoretical and empirical research. At the first stage, a literature review related to factors motivating learners' competence development in the context of work-based learning, has been undertaken. The second stage of research involves undertaking fieldwork in both college-based and workplace contexts including interviews with both learners and tutors/practitioners. The fieldwork was undertaken in a college of further education and workplaces. The college aims to facilitate a wider access to higher education (HE) for adult students, particularly women. It offers a range of courses for students seeking (1) to return to learning, (2) to access HE or (3) to make up for missed opportunities in the past. Twenty learners have been interviewed about (1) the way they use the new technologies (e.g. e-mail, internet, computer-assisted learning, educational software, etc.) and (2) how this enhances their motivation and reflects to their learning outcomes and skills development.

The respondents include adult learners who are undertaking courses in the field of management linked to their workplaces. The courses are structured to respond to the students' own needs and starting points. There is a strong emphasis on support for the individual learner, both within the subject modules and in an extensive programme of additional learning support. Many of the adults had not been able to take up educational opportunities in the past due to financial, personal or social barriers. Some of them had difficult experiences at school which damaged their confidence. We have been conducting semi-structured interviews with learners who have experience in both workplace and college environments in order to reflect on the factors motivating their actions and attitudes in various contexts including the use/role of the new technologies within/for their learning. Interviews and collaboration with tutors have been carried out in order to develop appropriate methods and approaches for facilitating learners' motivation.

13.4 Research Findings: Developing Competences in the Workplace

The workplace has been considered to be a primary site for the development of work-related competences. Mulholland et al. (2005) observe that factors such as rapid technological development, job mobility as well as unemployment have had

a profound impact on competence development. Employees are expected to acquire their competences not only through formal education but also through the 'real' setting of their workplace. Evans et al. (2006) provide a framework for understanding learning in and through the workplace, emphasizing the need to build on but move beyond the currently dominant social theories of learning by keeping three scales of activity in mind. Two of these are to do with the contexts of learning – focusing on the employer–employee relationship and the workplace environment respectively. The third scale involves the individual employees and the ways in which they interact with the opportunities available in and through work. Within this framework, employee dispositions and their motivations have to be understood in relation to the opportunities available to them for learning on and off the job, through the social relations of the workplace and through work-related experiences of all kinds (see also Hodkinson et al., 2004). The ways in which employees develop their competences (including prior, tacit and embodied competences) and engage their knowledge and skills in different settings is best understood, within this framework, in terms of 'recontextualisations' rather than in terms of conventional 'transfer' (see Evans et al., 2007). The recontextualisations involved in learning do not take place automatically, simply or immediately and are rarely explicitly supported. Many observers (e.g. Malone, 2005) draw out the tensions between learning at work versus learning in the classroom, stressing that in many cases learning at work is more useful, memorable and lasting as it is more meaningful and relevant to employees' and business's needs:

> We get constant feedback from our actions and the lessons learned from our success and failures can be immediately applied. This contrasts with formal courses where the learning often is not relevant to our needs and the opportunities for application do not take place for some time (Malone, 2005, p. 69).

What is more, the author suggests that:

> In some specialisations, workplace learning is the only option because the rate of change is so rapid and the number requiring training is so small that it is not feasible to use traditional classroom approaches to training and development (Malone, 2005, p. 69).

Discussing the UK context, Fuller et al. (2004) comment on the tensions existing between the needs of businesses and employees, and between formal and workplace learning:

> There is a widely held belief that formal or qualification-focused learning (QFL) is 'ritualistic, rote and virtually meaningless' while work-based learning (WBL) is 'real, relevant and meaningful'. Whilst such views are unlikely to be wholly accurate [...] some form of transdisciplinarity is increasingly required in both QFL and WBL (Fuller et al., 2004, p. 7).

As reported by Rose (2005), the level of skills attainment among employees in terms of formal educational qualifications rose steadily in the UK during the 1990s. However, as Rose (2005) discusses further, high matching of the qualification held by the employee within those normally demanded by the employers and for the job concerned can be assumed. Unwin and Fuller (2003) argue that improvements to schooling on its own cannot overcome the so-called 'low-skills equilibrium'

(Finegold and Soskice, 1988) and that the workplace has to make a bigger and better contribution to the UK learning gap. The workplace can and should be a natural site for learning and competence development capable of motivating people to develop their wider competences, as the Evans et al. (2006) framework shows.

However, it is important to note that all the discussion on the benefits of workplace or informal learning does not aim to undermine the importance of formal education (e.g. college-based schooling). As summarised by McGivney (2006, p. 18), 'it is not intended to suggest that informal sources of learning are intrinsically "better" or of greater importance than formal instruction, but to highlight their value'. Our data support the view that learners' motivation is considered to be an important 'driving force' of the learning process in the area of work-based learning. The fieldwork allowed us to draw on two groups of motivational factors such as (1) those related to learners' personalities, backgrounds and learning environments; and (2) those related to the development and use of new technologies in work-based learning. The fieldwork indicates that such factors that may either stimulate or undermine learners' attitudes and motivation towards workplace learning.

13.4.1 Factors Related to Learners' Personalities/ Backgrounds/Environments

Significant factors related to learners' personalities/backgrounds/environments and their skills development are associated with their *previous educational experience/previous workplace experiences* as well as with their *attitudes and dispositions*. The research has shown that learners/employees with previous workplace and/or educational experience feel more confident within their current workplace settings. The interviews undertaken within our fieldwork suggest that learners are able to employ their previously acquired skills in their present workplace or learning environments which ultimately may facilitate their motivation and confidence at work. What is more, the interviews have shown that adult learners' individual biographies, dispositions and attitudes may further facilitate or undermine their motivation and learning success within their workplaces. In addition, their *family circumstances and financial situation* may significantly facilitate or undermine learners' motivation.

Our interviews allowed us to draw on a group of motivational factors related to the issue of a learning environment at a workplace. It has been drawn on in a number of interviews that a stimulating 'learning environment' in a workplace may considerably facilitate learners' motivation and skills development. In this context the workplace is perceived as an environment in which people learn because it provides opportunities for them to deploy and develop their skills. The extent to which employees' motivation and competence development at work is influenced by how they experience their working environments has been underlined by our research. Building on definitions by Fuller and Unwin (2004) of expansive and restrictive workplace environments and our previous research (Evans et al. 2004a, 2004b), we argue that workplace environments *experienced as expansive* facilitate learners'

motivation, further development and deployment of their skills whereas *environments experienced as restrictive* are found in workplace settings that do little to encourage their motivation, further professional training or development of new skills. Our data suggest that expansive and restrictive environments are considered to be two types of a leaning context.

So-called 'extrinsic' factors defined by Malone (2005) have also been associated with a learning context:

- fear of redundancy;
- promotion prospects;
- managerial pressure;
- peer competition.

Our data suggest that such factors also play an important role in facilitating or undermining learners' motivation. However, motivational factors such as, for example, fear of redundancy or any kind of a negative pressure, may work as a short-term motivator, but are unlikely to be effective in the long term.

Another important benefit associated with a stimulating learning context is that of engagement of learners. Our data suggest that the workplace learning environment may contribute to the re-integration and motivation of those who are disaffected and disengaged by drawing on an interest in work. What is more, workplace learning seeks to address the interests of those who, while academically able, feel out of kilter with schooling and are seeking practical experience alongside the acquisition of qualifications which offer the progression to higher education (Avis, 2004, p. 211). The importance of addressing learners' individual needs has also been associated with a stimulating learning environment. Furthermore, sensitivity has to be shown when creating opportunities for those employees who lack basic skills and for those with learning disabilities.

The project's data suggest that certain kinds of learning environment may actually help adult learners who are engaged in retraining or 'up-skilling' to recognize the importance of their prior experiences through making their tacit skills and personal competences visible. This involves employing these abilities in a wide range of educational, social and work activities.

13.4.2 Factors Related to the Use of the New Technologies

The growing role of the modern technologies in work-related learning has been emphasized by our interviews' data. The use of the new technologies is considered to be an important trend across all areas of work-related learning. The interviews with both the learners and tutors indicated that the introduction of a range of the new technologies in a college environment has been regarded as a beneficial development that could improve learners' motivation and facilitate their skills and competence development. Our data identified the following types of the use of the new technologies in both college and work-based environments:

- Teaching/learning associated with the use of electronic delivery methods such as CD-ROMs, video conferencing, websites and e-mail;
- Learning that is taking place over the Internet, a computer network, via CD-ROM, interactive TV, or satellite broadcast;
- A process of learning that facilitates education using a network (e.g. Internet);
- Using software created to teach the user new skills or/and evaluation their skills.

The interviews with the students enabled us to draw on the following benefits of the modern technologies that are largely associated with the efficiency of work and learning processes, including:

- speedy communication;
- improved co-ordination;
- more intensive collaboration between both the learners and their tutors;
- easier ways to submit assignments;
- quicker feedback from tutors;
- easier access to information, e.g. through Virtual Learning Environments (VLE).

The growing importance of the VLE has been emphasized by our interviews. As noted by a student:

> We have a virtual learning environment, which has documents on it. So we get handouts on paper but there are also things there that we can download and look at, in addition to what we get directly on the course. I've looked at one of those and it's been really useful. [...] you would really miss out if you didn't. And it's a way of sharing information with the other people on the course as well. And especially, because it runs across three different venues, it's also a way of exchanging information with the people who are in the different groups.

Another student also stresses that the VLE is:

> A quick and accessible way of sharing information, and sometimes when you get lots of pieces of paper it's difficult to sort out what you need. Whereas if you access it that way you can pick out the bits that you want.

While both the learners and the tutors recognize the potential benefits of the technologies, they notice that all types of the modern technologies need to be implemented carefully, taking into account learners' individual needs and backgrounds. Some students may need more training and support before they can actually feel confident to use the modern technologies (such as e-mail, Internet or Virtual Learning Environments) within their learning or workplace settings. Some students need more time to get used to the new technologies. As noted by another student who combines her studies with part-time work:

> I'm generally quite resistant to checking out new things, especially when they are technology. Also, when I get home I don't necessarily want to be looking at a computer screen, having done it for the day.

Our data suggest that if learners' individual needs and requirements are not taken into account, the modern technologies may provide barriers to learning and, as a result, undermine motivation of the learners. Our interviews have shown that tutors'

support may play an important role in the process of supporting the learners into using the technologies for the benefit of their learning.

What is more, our findings indicate that the motivational factors related to the use of new technologies may be contextually specific and they can take different roles in different learning or workplace contexts. What could facilitate students' motivation in a college environment might actually hinder their progress in a workplace environment. This could happen as a result of various factors and conditions, such as, for example, restrictive learning environments, lack of supervisory support for the learners, poorly developed training materials on how to use a software or electronic equipment etc. Such factors and conditions may undermine the learners' motivation not only towards the use of the new technologies but also towards their general skills and competence development in the workplace.

13.4.3 Facilitating Learners' Motivation

Our interview data suggest that tutors may employ a number of methods and approaches to help the learners to make their skills visible and to improve their motivation. Team work, one-to-one tutorial help and encouraging learners to help their fellow learners have been identified as the methods that may help to uncover tacit skills and to enhance their motivation. Another important factor has been associated with prior/current workplace experiences of the adult learners. One student who, combining her studies with part-time work, commented on how her workplace experiences contribute to her understanding of learning experiences in the college. At the same time, her experiences within the college settings motivate her towards evaluating and reconsidering her workplace practices:

> What motivates me personally is I do enjoy learning, the process. And I do think it will be useful because [...] when you are in the working environment, you are very much coping with the day-to-day demand and you don't have time to step back and think about it. So seeing this, coming on this course, rather, gives you that insight, almost stepping back and looking at things you do at work more objectively.

The interviews have shown that tutors and supervisors may considerably facilitate learners' motivation by drawing on their work settings and experiences in the course of the learning activities and assignments. As noted by another student:

> What I like about the course, it's very work-related, because we are asked to think about our own situation and how we work ourselves. I find that really helpful because it makes it easier to understand that work that you are doing if you can apply it to your own workplace.

The tutors support the view that the new technologies may play an important role in implementing methods and approaches to facilitate the learners' motivation. One specific approach that has been piloted in the college has aimed to enhance the learners' motivation through self-evaluation of their personal competences and tacit skills. The approach has employed the DCA (Dynamic Concept Analysis) modelling method (Kontiainen, 2002) as a tool for self-evaluation of personal competences in the context classroom or work-related activities. The DCA method,

assisted by a dedicated software programme, enables users to build conceptual models, which can be used for self-evaluation purposes (Evans et al., 2004a,b; Kersh and Evans, 2005).

The tutors maintain that the self-evaluation of the learners' skills in the context of classroom activities may help the learners and their tutors to establish links between skills development and certain classroom tasks and assignments. As a result, the process of skills development and deployment could be potentially facilitated by tutors through more purposeful implementation of various activities and tasks within the classroom. Self-evaluation of the learners' personal skills and competences in the context of classroom activities has a positive impact on the learners' confidence, self-assurance and learning outcomes. Learners' awareness that they are able to use their previously acquired skills in various classroom activities enhances their confidence and encourages them to use their skills more actively and intensively. Moreover, if the learners recognise that they develop or deploy their tacit skills within various classroom activities, they feel motivated towards more active participation in such activities, which ultimately contributes to their positive attitudes towards learning.

13.5 Conclusions

This paper considers the work in progress undertaken to date on the project and discusses emerging findings and conclusions. Our fieldwork data support our findings that both tutors and learners consider motivation as an important factor that facilitates recognition and deployment of learners' skills and competences. Under the current demands of the labour market, the challenge of competence development in the areas of VET and workplace learning has taken an important place. The problems of competence development are closely linked to an issue of developing skills and abilities required by the 'knowledge society'. Employees need to possess and/or develop the competences that would enable them to perform their work as well as to contribute to their personal development (e.g. through the development of their communication skills, time management, etc.). The workplace as a site for learning has become an increasingly dominant issue in a number of research publications on work-related learning and skills development.

The project's findings suggest that providing adult learners with the opportunities 'to be motivated' or facilitating their motivation may enhance their learning success and skills development. Tutors may employ various methods and approaches to facilitate learners' motivation including employing self-evaluation tools, facilitating teamwork and group discussion, providing feedback and support for learners. Tutors may also motivate learners by providing them with the opportunities to relate their acquired skills to their workplace situations and environments.

The modern technologies may play an important role in facilitating the learners' motivation. The college's practitioners employed the DCA method as a tool for learners' self-assessment through graphical modelling of the learning processes. The

DCA approach could help not only to evaluate learners' personal competences, but also to explore what classroom or college activities, events, tasks etc., contribute to the acquisition and development of personal skills and competences. In other words, in addition to self-evaluation of the learners' personal competences, it may be useful to assist learners and tutors in evaluating the issue of how (e.g. through what activities) learners can acquire or develop certain skills or what skills are related to what activities. This aspect is related to the potential practical benefits of self-evaluation that would enable both learners and tutors to facilitate learners' success in college and improve their motivation.

Our evidence also indicates that the motivational factors may be contextually specific and they can take different roles in different learning or workplace contexts. What could facilitate students' motivation in a college environment might actually hinder their progress in a workplace environment. For example, factors related to the use of modern technologies could encourage learners towards skills development in a college environment. However, in a workplace environment they could be perceived differently by learners or employees. Interviews and further collaboration with tutors is being carried out in order to develop appropriate methods and approaches for facilitating learners' motivation.

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Chapter 14
Coaching and Collaborative Work-Based Learning in Dutch VET: The 'TEAMstages' Project

Jeroen Onstenk

14.1 Introduction

In the Netherlands, new apprenticeships have become part of an elaborated system of vocational education, combining school and workplace learning. In order to reach the objectives of vocational education with regard to competence development, effective problem solving on the job and work-process knowledge, the quality of workplace learning is of crucial importance. New theoretical approaches on workplace learning are used to throw light on developments in Dutch apprenticeships. Different and more intensive interaction patterns between employers and vocational schools as well as between teachers and workplace coaches are developed to improve the connection between learning in school and in the workplace. Government as well as schools and companies are attempting to uphold the quality of learning in apprenticeships. Still, there are two main issues in dispute: the quality of workplace learning (content, guidance, assessment) and the quality of the connection between workplace and school-based learning, despite attempts to make VET more practice oriented and to improve connections between school and work. VET innovation should pay more attention to quality improvement and connectivity of work-based learning by establishing quality criteria for work-based learning places, by enriching workplace learning and by designing curricula which integrate learning places as well as learning experiences.

The second part of the paper focuses on such a recent innovative project, where apprentices on different levels in the VET system work together in a team on specific assignments: TEAMstages ('Team traineeships'). This project involves new ways of organizing guidance and coaching, including peer coaching, as well as a new and more intensive role of school coaches at different school levels. This part is based on evaluative research of a developmental project, involving 10 companies, 45 students and 3 VET schools. Learning arrangements were designed to stimulate learning and competence development at the workplace by executing stimulating

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company assignments, while working and learning together in a team of students from different levels and qualifications. Also, there was collaborative coaching by school and workplace coaches. There were good results with regard to competence development and work-process knowledge.

14.2 Work-Based Learning in Dutch VET

In recent years workplace learning has become an essential part of every senior secondary vocational education and training course (Onstenk and Blokhuis, 2007). In Dutch VET there are two 'learning pathways,' a school-based pathway and a work-based pathway (Onstenk, 2004). Both pathways combine learning in school and in workplaces, but in different quantity. The school-based pathway includes workplace learning (traineeship) for 20–60 per cent of the total curricular time. The actual amount is increasing: in 2005 the average over all courses was more than 50 per cent. Underpinning this is the growing value attached to workplace learning, both for motivation of students and for attainment of objectives with regard to problem solving and work-process knowledge. The work-based pathway includes apprenticeship in a company for at least 60 per cent of the time, as well as a one- or two-day school release. In both strands, regional VET colleges deliver the school part, and also bear responsibility for the whole learning process as well as for awarding the qualification._

Apart from the quantity of work-based learning, pathways differ with regard to the responsibilities of companies. In the school-based pathway, participants are students enrolled in college. They participate in workplace learning (traineeships) in a couple of shorter and longer (between three months and a whole year) periods in a number of different labour organizations. In the work-based pathway, apprentices are as a rule employees who combine part-time education with an apprenticeship in a company.

Workplace learning in VET is appreciated by apprentices and students (JOB, 2005), often much more than school-based learning. But research shows that the quality of workplace learning is not guaranteed and that often learning in school and in the workplace are not integrated (Onstenk, 2003; Blokhuis, 2006).

Schools, companies and national bodies are attempting to uphold the quality of learning in traineeships and apprenticeships on all levels. There are two main issues in dispute: the quality of workplace learning (content, guidance, assessment) and the quality of the connection between work-based and school-based learning. There is agreement that – although not necessarily on how – VET innovation at all levels should pay more attention to quality improvement as well as connectivity of work-based learning by establishing quality criteria for work-based learning places, by enriching workplace learning and by designing curricula which integrate learning places as well as learning experiences (Onstenk and Blokhuis, 2007). Formal requirements are supplemented with more substantial ones, which take into account organizational aspects and quality of guidance, but also learning opportunities and

possibilities for tailor-made trajectories are monitored much more closely (Onstenk and Janmaat, 2006).

Workplace learning in Dutch VET, apprenticeships as well as school-based pathways, can offer good opportunities for what Fuller and Unwin (2003) call expansive participation, if facilities for deeper, more investigative and imaginative learning are provided by vocational school attendance, access to qualifications, learning programmes, and organization of apprenticeship through language and artefacts such as documents, tools, assignments books or Personal Development Plans (Blokhuis, 2006; Onstenk and Janmaat, 2006).

However, learning opportunities vary strongly among apprentices and workplaces, due to a combination of structural, cultural and pedagogical factors. Learning in the workplace is determined by the actual content of the work. Learning is integrated with daily routines and triggered by an internal or external jolt. As such it is often not highly conscious, but haphazard and influenced by chance. It is an inductive process of reflection and action (Marsick and Watkins, 2001). This implicit learning is often not guided by learning objectives, but by (developmental) work objectives. Learning takes place during performing activities and participating in practice. Therefore, learning possibilities depend largely on the structures, norms, values and practices within workplaces. But individual agency always shapes what constitutes, through workplace 'affordance', an invitation to participate in learning (Billett, 2002). Probably the most powerful learning results from performing, with more expert colleagues, new, unknown or unexpected activities (Onstenk, 1997; Blokhuis, 2006). The occurrence of a disturbance or something unexpected can be a strong source of learning, but is by nature not planned. The result of both agency and incidental (or 'opportunistic', Langer, 1997) learning is that what, and when, someone learns at the workplace is neither always predictable nor only guided by explicitly formulated learning objectives.

Learning as well as working is a social process. Apprentices learn in a social context. The apprentice becomes part of a social environment and a community of practice like a team, a division, a labour organization or professional group. Vocational learning can be seen as a process of enculturation and participation in a community of practice whose members share activities and responsibilities (Wenger, 1998). Learning in the workplace presupposes that language is a part of practice, not only because an apprentice can learn from talk, but also has to learn to talk in order to get access to the community of practice (Guile and Griffiths, 2003).

Learning to participate in a working community is also an important objective of work-based learning. Social and communicative performance refers to the social character of the work place, both as a working environment and a social context. It implies co-operative skills, social-communicative skills and cultural skills.

14.2.1 Coaching

Blokhuis (2006), in an in-depth analysis of apprenticeships in different sectors, finds that practice coaches can play a stimulating role in building narratives if they

are available during the entire period of workplace learning, really know what is required to perform tasks and participate in daily work processes, are well prepared and are willing to search for ways of interaction instead of just using fixed routines. However, he also finds that these conditions are not always fulfilled. Sometimes the formal and trained mentor is a foreman or an employee of the personnel department, whereas actual guidance and mentoring is performed by a non-trained experienced fellow worker (Onstenk and Janmaat, 2006). That is not necessarily a bad thing. Younger, less experienced workers can actually be more effective coaches, presumably because of their age (closer to the apprentice), but also because, being less experienced, they remember their own learning process better (Blokhuis, 2006). Blokhuis developed and tested guidance guidelines, supporting the interaction between apprentice, mentor and other colleagues. In these guidelines four phases were distinguished:

- Orientation on the task (select a task, discuss with the student/apprentice, determine existing relevant knowledge, discuss the learning process, give instruction);
- Preparation for the execution of the task (discuss observation, prepare together, make available necessary tools and materials);
- Supervision of execution and discussion about performance and progress;
- Improvement by repetition and reflection.

Using these tools made practice coaches and fellow workers more aware of their guidance practices and enhanced the chances that high quality consistent interaction takes place. This guidelines are now adapted for a number of VET schools and learning companies.

14.2.2 Quality of Connections Between Workplace and School Learning

There are also differences with respect to close and effective connections between learning in school and in the workplace. Research shows that many practice coaches are unaware of content and subjects taught at school (Onstenk and Janmaat, 2006). Or things taught at school are experienced as irrelevant for solving occupational problems (Poortman, 2007). Deep learning by apprentices is difficult to realize. Many school teachers do not know enough about vocational practice to help understand the links. There is often little preparation for or effective use of workplace learning experiences in school settings (Onstenk and Janmaat, 2006; Poortman, 2007). There is lack of opportunity for experiencing different instances of vocational practice in order to understand the diversity of practice. By participating in – or by school or company supported discussions with other apprentices about – different companies, an understanding about the diversity of practices constituted under a particular occupation could be developed. Too few teachers or coaches stimulate learners to consider the particular requirements of the different practices in which

they have participated, in order to understand how the vocational practice differs across workplaces (Billett, 2001). There is little support for resituating existing knowledge and skill in new contexts.

Even in many new pedagogical concepts in Dutch VET, inspired by a short-sighted version of constructionist learning theory, workplace learning is often seen as a way to motivate students and apprentices for theory, but theory is not conceptualized as a way to better make sense of work experiences. There is, however, a growing number of projects and practices where different interaction patterns between employers and vocational schools are developed. They are aimed at improvement of the connection between learning in school and in the workplace and between developing competencies for new professionals and innovation of occupational practice (Onstenk and Janmaat, 2006). An example of this development is 'achievement-steered learning' (*prestatiegestuurd leren*). Rather than sending students as apprentices to a company, learning is organized around real work tasks and assignments, formulated by companies. These assignments fulfil requirements with regard to learning objectives (relevance, complexity, developmental quality). Guidance and reflection on learning and work processes and outcomes are improved. Teachers have an active role in this guidance, provided they regularly visit the company and the student and discuss progress and results. Students can take their work assignments to school, rather than the other way around. It is also expected that working on these real assignments will stimulate learning questions with regard to theory and learning motivation in students. In this kind of curriculum students participate in, a number of companies provided innovative assignments, covering the whole range of learning objectives.

14.3 Methodology

One of these innovative approaches is TEAMstages, a recent new form of traineeship in the Amsterdam region. In cooperation with this project, a developmental action research project has been started, running from November 2007 to July 2010. The research project has several aims: description, improvement, tool development, evaluation and transfer to regular VET. So far the descriptive stage has been completed, based on documents, self reports and interviews with stakeholders. Also results from the first year of TEAMstages are available, based on observations, interviews and questionnaires with students and coaches, as well as some test scores.

14.3.1 The Project

TEAMstages is a project of the Regional Vocational College (ROC) of Amsterdam in cooperation with the Van den Ende-Foundation, funded by a famous Dutch theatre, musical and television tycoon. The project resulted from contacts that originated when a new theatre was planned next to a new campus of the regional

college in the rapidly developing new Amsterdam city and business area South Axe (*Zuidas*).

The goal of TEAMstages is to realize hundreds of extra traineeship places. This innovative project is planned to run as an experiment for 4 years. A growing network of companies and (pre)vocational schools in the region of Greater Amsterdam is participating in the programme. The objective is that a growing number of students will get the opportunity to participate at least once in this kind of traineeship at TEAMstages. The academic year of 2006-2007 was the pilot year, in which the basic idea was tested by 53 prevocational, vocational and higher professional students in ten companies, ranging from a theatre, an event organization, and a bicycle factory to a home for the elderly. In one of the first projects, a team of students participated in the stage design of a new musical. In the following 3 years, the number of participants and the number of teams that work this way systematically will be extended to 500 a year. The working method will be further developed. After these 4 years – from 2010 onwards – it is expected that anchoring in the participating schools and companies will have taken place. The visible role of a commercial company, funding a public traineeship has potentially (and proves to have) a very positive impact on the involvement of employers and availability of quality placements.

Next to the assignments themselves, there is a strong publicity strand in the project, both local and national. There are a lot of meetings (organized by teams of students with professional support of the TEAMstages office) where students and companies discuss their experiences. A television show draws attention to the issues around work-based learning and traineeships. Experiences of students and coaches in company projects are shown on national television as a real-life 'docusoap'.

14.4 Results

The slogan of the project is: 'Let talents grow'. TEAMstages aim for powerful learning surroundings for talent development, work-process knowledge and workplace socialization. Making competence development of students the central issue implies important changes from traditional vocational education: more demand-oriented and more focus on stimulating students to reflect more on their own possibilities and choices.

14.4.1 Organising Work-Based Learning in Multidisciplinary, Multilevel Teams

The core of the TEAMstages project is learning in challenging real company assignments for teams of students. The teams are multidisciplinary and multilevel. Participants come from different levels in the vocational column: prevocational *(voorbereidend middelbaar beroepsonderwijs* or vmbo), vocational (*middelbaar beroepsonderwijs* or mbo) and higher professional (*hoger beroepsonderwijs* or hbo) education. Competences are developed by working together in a team of trainees (so

not in a 'normal' job with regular colleagues). Within each project agreements are made between the student, school and enterprise concerning the tasks, coaching and responsibilities. During the TEAMstages period a strong appeal is made to talents and workplace competencies (i.e. to plan or to cooperate) that participants want to develop. All parties are stimulated to identify talents of young people in the team, to connect and (further) develop them and hereby create new chances for them on the labour market.

The didactics of TEAMstages is build around a PDCA-cycle: Plan – do – check – act. The central element is working and learning together at challenging and realistic tasks. The participants must cooperate in a team with each other and experience how they need each other to complete the task successfully. The team makes a plan, carries this out and checks if results are as wanted and expected.

Students are prepared before their projects. There is organized preparatory training, focusing on

- group dynamic processes (what does it mean it for you to be part of a group and to effectively cooperate on a task);
- team building;
- giving and taking effective feedback;
- learning to handle successes and disappointments.

During the traineeship there is collaborative coaching by both school and workplace coaches. Coaches (both company and school) are supposed to be available at least one whole day a week. Coaching takes place in dialogue with the student. This asks other competencies of the coaches, competencies that are developed and trained within the TEAMstages concept. Also there is an emphasis on peer coaching. Higher level students (mbo and hbo) got a chance to practice management and leadership talents. In the process, students and employees from both educational institutions and companies give each other systematically feedback.

There is constant and systematic reflection on the process, both on student and on group level. At each stage, a number of evaluation themes is presented. Development of students is stimulated by helping them focus on their own learning questions, competences to develop, and by making them conscious about learning results: 'What have you as a student/participant got out of it'? Students get a new view of their possibilities.

14.4.2 Roles of Stakeholders

In the cooperation between TEAMstages and schools the affinity between the competence-oriented educational concept and the philosophy and practice of TEAMstages became clear. The way students are approached in TEAMstages contributed actively to the educational renewal addressed at the VET schools with regard to competence-oriented learning.

TEAMstages is an interesting project because it redefines the roles of the different stakeholders. Students commit themselves to an assignment to be executed in a team of (heterogeneous) students. Companies redefine specific needs and tasks as assignments that can be executed by teams of students. They also commit themselves to an intensive amount and quality of coaching. The school commits itself to deliver more coaching than in regular apprenticeship or traineeship, and also to supporting students in integrating their learning experiences in the regular courses. As the evaluation of the first year shows, this was difficult to achieve for the schools. In the project school coaches are coach of a whole team, so they have to deal with students not only from their own school (and level) but also from other schools and levels. Also they were supposed to take more time for coaching than usual. Both turned out to be difficult to realize. Nevertheless, schools are enthusiastic about the project and are determined to solve these problems. Also all companies continue their participation in the project with new assignments.

14.4.3 Learning Results

In the first year all ten projects ended successfully (the assignment was fulfilled), although sometimes after a difficult initial period. 7 students (of 53) dropped out.

Students as well as company coaches reported good results with regard to competence development and work-process knowledge. Students were in general very enthusiastic and scored high on some specifically designed competence tests. Students became aware of the fact that they did not learn (only) for a diploma, but for a career, and most were motivated to develop further by means of continuing vocational education.

The ‘docusoap’ shows very touching and strong scenes where coaches and peers try to convince students to be on time or to take the assignment seriously. But there were also proud students when their product worked, whose performance was a success, or when they were thanked by clients.

But it turns out that even in this experimental situation, with relatively large investments in coaching time by both school and company, establishing a connective relationship between workplace learning and learning in school is difficult, especially with regard to conceptual vocational content knowledge as a tool to interpret and change the work environment. Although students and coaches agreed that a lot was learned, this was not necessarily well connected to the courses students were enrolled in. Partly this is a result of the multidisciplinary character. Improving this connection is an important aim of the second stage of the innovative project.

14.5 Conclusions for VET Practice and Research

VET innovation should focus on quality improvement and connectivity of work-based learning by establishing quality criteria for work-based learning places,

by enriching learning in the workplace and by designing curricula which integrate learning places as well as learning experiences. Vocational schools in the Netherlands pay more attention to structuring, supporting and assessing communication processes between school, company and students and apprentices about what could and should be learned in a specific learning workplace, what the apprentice would like to learn, how this fits in the requirements of the qualification, and, of course, what actually has been learned.

Even in the experimental situation of TEAMstages, with relatively large investments in coaching time by both school and company, establishing a connective relationship between workplace learning and learning in school proved to be difficult, especially with regard to conceptual vocational content knowledge as tool to interpret and change the work environment.

There is a need for a more connective relationship between workplace learning and learning in school, where practice helps to explain the meaning and value of concepts, but more importantly, where concepts and theoretical knowledge can become a tool to interpret and change the world. Learners should acquire the capability to interpret new situations in the workplace in the light of concepts they have developed in school or earlier practice encounters, as well as to deal with counter-interpretations. If apprentices and students are ill prepared for contributing to the development of new knowledge or new social practices, there is the risk of limiting educational objectives to adaptation to existing practices, rather than to develop an intellectual basis for criticizing existing work practices and taking responsibility for working with others to co-shape work by conceiving, and implement where possible, alternatives. This limits the contribution of VET to personal as well as socio-economic development and innovation.

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Chapter 15
Costs, Benefits and Quality of Apprenticeships – A Regional Case Study

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15.1 Introduction

Not only, but especially, in countries where VET is carried out in an alternating system between school and enterprises, the issues of costs and benefits of carrying out apprenticeships is important for all stakeholders concerned. Previous research has already been undertaken at the Federal Institute for Vocational Education (BIBB, Germany) as well as the University of Berne (Switzerland), developing methods to collect data on cost and monetary returns of workplace-based apprenticeship, and using them in different national surveys. On this basis, the project 'Innovative Berufsbildung 2010' (Innovative Apprenticeship 2010) in Bremen developed instruments for companies to self-evaluate the cost-effectiveness and quality of in-company phases of VET. The QEK (*Qualität, Erträge, Kosten* – quality, returns, costs) tool allows the companies to assess their costs and returns as well as the quality of the training they provide. It was tested and implemented in a representative regional study in the Bremen region. Currently, more than a hundred companies make use of the self-evaluation tool.

Economic studies that investigated the relationship between education on the one hand and inventiveness and competitiveness of enterprises and national economies on the other came to the conclusion that countries with a dual system of vocational education and training and a training of engineers that builds upon the former have a competitive advantage in international comparison (Hamilton and Hamilton, 1999; Keep and Mayhew, 2001). Some further arguments are provided that give good reason to maintain and modernise this tradition of vocational education. Among these are:

- a relatively low youth unemployment rate as the training market is linked to the labour market (Descy and Tessaring, 2001); and
- the positive effects on the integration of young people into society.

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However, what is under dispute is the costs that are incurred by dual vocational training in comparison to school-based vocational education and higher education. According to a recent German study (Konsortium Bildungsberichterstattung, 2006, p. 26) the expenditure for dual vocational education, which amounts to 10,800 euros per capita and per year, is the highest compared to the other sectors of the education system. The costs for a student at a university of applied sciences, by contrast, are approximately half the costs of an apprentice. The situation in Switzerland is completely different. A representative study has shown that the returns generated by the productive work of apprentices exceed the gross costs of the training so that there is a net benefit for the company part of dual vocational training (cf. Schweri et al., 2003).

The reason for this difference is that in-company training in Swiss enterprises puts more emphasis on learning in qualifying and productive work processes compared to German companies. This leads also to a high training quality in Swiss dual vocational education and training, which is indicated by the relatively high rate of apprentices who attain a university entrance qualification together with their vocational qualification.

15.2 The Value of a Self-Evaluation Tool for Assessing the Costs, Benefits and Quality of Apprenticeships

Enterprises that behave rationally in the sense of human capital theory (cf. Becker, 1964) take care that the wages of their employees do not exceed their productivity. When a company trains skilled workers, its behaviour is rational if the returns are at least equal to the training costs. Under the conditions of global competition it is the economic interest of enterprises to ensure a high training quality, a high occupational commitment and a self-financing training. From the point of view of educational economics it is therefore a puzzling question why in Germany a large number of companies continue to offer apprenticeship training despite the fact that this leads to considerable net costs.

An explanation proposed by Walden and Herget (2002) is the ‘opportunity benefit’ of in-company training that is generated after the end of the apprenticeship period. From an economic point of view, this is an investment-oriented training policy of the enterprises. Other explanations are based on the idea that the tradition of ‘apprenticeship’ is rooted in the German industrial culture. Cultural traditions are a factor of continuity and stability amidst technological and economic change. A convincing objection to this view, however, is the fact that this alleged tradition is absent in the new service sectors and that there is an increasing erosion of dual vocational training in traditional sectors of industry and crafts. The reason for this process is that the human resource development of enterprises is increasingly shaped by the development of intercultural orientations and action patterns in the course of the internationalisation of business processes.

In the Anglo-Saxon tradition of human resource management, dual vocational training is often presented as a system that creates demarcations within companies

between work contexts organised according to the principle of vocationalism (cf. Kern and Sabel, 1994). In the course of the increasing internationalisation of economic development, the commitment of enterprises to dual vocational training can no longer be taken for granted. This tendency can be reversed only if the advantages of dual vocational education and training can be demonstrated from the perspective of the economics of education. Accordingly, the economically rational behaviour of enterprises demands that they engage in training only if the sum of training costs does not exceed the sum of returns.

Despite the crucial importance that is assigned to economic calculations for the training policy of enterprises, practical experience shows that few enterprises carry out detailed cost-benefit analyses for their training programmes. It appears that the consideration of costs and benefits of training is instead based on rough estimations, which very often leads to an overestimation of the costs and an underestimation of the benefits. Companies that train in order to contribute to the 'supply of training opportunities for young people' receive social recognition, the assumption being that they take on a financial burden. Even if the training activities are economically feasible from an entrepreneurial point of view, companies are reluctant, given the public opinion, to affirm the profitability of training. This leads to the epistemic interest of developing a self-evaluation method that allows companies to obtain information on the quality and profitability of their training activities by entering relevant data on costs and returns into a software tool.

A possible objection against such an instrument might be that the reduction of training costs and the elevation of returns entail the risk of reducing the quality of training as apprentices might be employed only as cheap workers. This argument, however, can easily be refuted because it can be demonstrated that a high quality of training is possible only when the instructive potential of productive work tasks is fully exploited for learning in the work process, which simultaneously improves the profitability of training, too. Practical work experience and their reflection and communication in processes of organisational development lead to the gradual building of work process knowledge that enables the trainees to master previously unknown tasks as well. The utility of a high training quality lies in the fact that the trainee is equipped with the professional competence of a skilled worker at the end of the training programme. Full professional competence can be attained only in a dual vocational education and training programme where reflected work experience is the cornerstone of competence development.

Accordingly, the following two insights justify the interest of enterprises in a tool for the assessment of the quality and profitability of training:

1. Costs, benefits and quality of apprenticeship training are interrelated. This relationship can be analysed.
2. A high level of training quality can be achieved through a model of in-company apprenticeship training that is based on learning in real and productive work assignments that challenge and stimulate professional competence development.

15.3 Methodology

The QEK tool was developed in the first place in order to give training companies the opportunity to measure the costs, benefits and quality of the training they provide. The companies involved use the tool autonomously to analyse the cost-benefit situation as well as the quality of training. This way they obtain information about the potential for improving the organisation and design of their training programmes. In addition the instrument delivers average figures as benchmarks by which the companies can assess how well they perform in terms of costs, benefits and quality of their training in comparison to the other enterprises in their sector or with the total of participating companies.

The QEK tool records the gross costs of the training, compares them with the value generated by the productive work of the trainees during their training period and describes the training quality on the basis of various parameters (see Rauner, 2007 for details). The measurement of the gross costs is based on the procedure developed at the Federal Institute for Vocational Education (see Beicht and Walden, 2002). The costs are composed of the staff costs for trainees and trainers, the operational costs and other costs according to the following list:

- Staff cost of trainees
  - Training allowances
  - Statutory social security contributions
  - Voluntary social security contributions
- Staff costs of trainers
  - Full-time trainers
  - Part-time/sideline trainers
  - External trainers
- Operational costs
- Other costs
  - Teaching and learning material, media
  - Fees to be paid to the competent body
  - Professional and protective clothing
  - External training
  - Training management

The training benefit is generated by the productive work of the apprentices. The benefit is equal to the wages that the company would have to pay to skilled workers if it did not employ trainees. The additional ‘opportunity benefit’ identified by the cost-benefit analysis is mainly attributed to five factors (cf. Cramer and Müller, 1994; Walden and Herget, 2002):

- Recruitment costs: these are avoided when trainees remain in the company as regular staff members since job advertisements and interviews are not needed.
- Familiarisation periods: these are necessary when skilled workers recruited from outside need to become acquainted with the specific job tasks. This familiarisation can be saved in the case of employees trained in the company as the preparation for the future position is often integrated in the training.
- Stability of the wages system: externally recruited employees usually receive a slightly higher initial salary than internally recruited ones.
- Fluctuation and mismatches: the risk that a newly recruited staff member turns out to be unsuitable for the position is considerably reduced by internal recruitment among the company's trainees.
- Losses generated by skills gaps: a shortage of skilled workers may be compensated by overtime work of available workers, but may limit the company's capacity to accept new orders. The assurance of an adequate workforce supply by engaging in training can reduce this risk and can therefore be counted as part of the 'opportunity benefit'.

The self-evaluation method QEK, however, does not take into account these additional factors. This means that each enterprise applying the QEK tool must decide on its own what its training programme is worth when it creates net costs. QEK is based on a *production-oriented* and not an *investment-oriented* approach to training.

The quality of training is evaluated mainly indirectly on the basis of the trainers' assessments. The QEK tool evaluates several items that are related to two dimensions of training quality, namely, the quality of professional competence development and the quality of the training process. The former represents the subjective dimension of training, i.e. the effect of the process on the apprentices, the latter the objective dimension, i.e. the characteristics of the process itself. The subjective dimension refers to the interrelated aspects of vocational identity and professional competence. These development processes are measured by the indicators of occupational commitment and professional competence. The latter is attained only at the end of the training process and is accordingly evaluated only at that time. The objective dimension, i.e. the quality of the training process, includes quality criteria that can be fulfilled independently of the temporal sequence of the process. For instance, the embedding of vocational learning processes into work processes which are in turn embedded into business processes and can be experienced as such is possible from the very beginning of the training. Conversely, the business processes might gradually become hidden from sight when the specialisation of the training is advancing. This means that types of vocational learning that meet the criteria of autonomous learning in a process-oriented training course can be established already at the beginning of the training.

As the QEK tool evaluates the two quality dimensions together, one can normally expect a steady improvement of the quality in the course of the training programme. If the training quality improves from 1 year to the next, this is also a sign that the training potential that is associated with learning in qualifying work processes was not fully exploited at the beginning of the training programme.

The self-evaluation tool analyses the two dimensions of training quality on the basis of six different quality criteria:

1. *Learning in the workplace:* Relevant theories of learning and development have in common the view that experience-based learning in the work process is crucial for vocational training. The integration of vocational learning into the work processes of the training company is particularly supportive for the development of professional competence (cf. Bremer and Haasler, 2004). Therefore, the amount of time spent on learning in productive work processes can be used as an indicator for the quality of training.
2. *Professional level of training:* This criterion is based on the assumption that it is only the participation in and the independent fulfilment of professional tasks in the work process that guarantees the development of professional competence. Trainers are asked to what degree the assignments of trainees reach the level of 'professional tasks' (as opposed to 'Everyman's tasks').
3. *Independent learning:* The completeness of professional activities is emphasised in training curricula as a key element of training quality. This criterion is justified by extensive research in labour studies and business administration (cf. Ulich, 1994, ch. 4; Rauner, 2002, pp. 27ff.). In this context the category of activity is interpreted as determined and conscious action. The concept of complete professional action was adopted in vocational pedagogy and assigned a relevance that extends far beyond its origins in labour studies (Rauner, 2006).
4. *Learning in business processes:* In the course of the re-engineering of enterprises since the 1980s the functional organisation of enterprises is overlapped or replaced by an organisation based on business operations. The introduction of lean hierarchies and the reversal of the horizontal and vertical division of tasks entailed the transfer of responsibilities into productive work processes and the introduction of participative types of organisational development. There was a direct challenge for vocational pedagogy to adapt these management concepts for the training process. The result was the paradigm of business process orientation in vocational education (Dybowski et al., 1995). Since then, process-oriented training is an important goal of dual vocational training.
5. *Occupational commitment:* Professional competence development always takes place as an interrelationship of competence development and identity building. The development of vocational identity is inseparably linked to the development of professional competence (Blankertz, 1983; Kirpal, 2004). This has to be distinguished from the acquisition of particular competences, e.g. in the sense of certified modular qualifications. Vocational identity is the basis of occupational commitment, which is expressed by performance orientation and quality awareness. This aspect of the training quality is measured by a scale based on relevant empirical studies in commitment research (cf. Cohen, 2007).
6. *Professional competence:* Indicators of professional competence are the results of the final examination, the general competence level at the end of the training process, and the time needed after completion of the training programme to reach the competence level of a skilled worker.

15.4 Research Findings

Analysing the results of the self-evaluation instrument for the Bremen region produced evidence that in our sample, quite contrary to previous studies, the companies on average do not experience net losses as a result of carrying out apprenticeship training. In fact, approximately 55 per cent of the companies that took part in the self-evaluation realised net returns. The companies' actual figures diverge quite widely, some companies investing or gaining more than 10,000 EUR per apprentice and year.

Numerous possible factors have been analysed to explain this result. As in previous studies (e.g. Schweri et al., 2003; Beicht et al., 2004), we found only a small effect of the companies' economic sector. In general, companies from the trade sector are performing better than commerce, industry and civil service, which are sectors of net losses. In terms of size there is another small effect: apprenticeships at larger enterprises tend to be more cost-intensive and less productive than apprenticeships carried out by smaller enterprises. A major effect, though, is determined by the occupation. For this effect, one factor is the salary of a skilled worker – the higher this wage, the higher the productivity of the apprentice as this productivity is measured as a percentage of a skilled worker's productivity. Still, it looks as if another factor is accounting for the occupation-specific effect as well. Different occupations are traditionally learned in specific ways. There are, accordingly, differences among occupations in the possibilities for carrying out an apprenticeship in a way that the apprentices learn through work and learning tasks and that learning can be embedded in the company's productive activities.

Our evidence also suggests that another important factor influencing costs and benefits is the company itself and the way the apprenticeship is organised at company level. In one and the same occupation there are considerable differences between the companies. Thus, companies themselves are able to influence, to some extent, the profitability of apprenticeships.

In terms of apprenticeship quality, the analysis of the self-evaluation results shows that major differences between the companies occur first of all in the first 2 years of apprenticeship. An 'average' apprenticeship reaches an acceptable level of quality with regard to professional competence and independent learning and working in the third year. But precisely in high-quality apprenticeships, the apprentices are carrying out demanding work and learning tasks that support the development of autonomy already at the beginning of the apprenticeship. The result is a relatively fast growth of competence, allied with higher occupational commitment and a faster attainment of higher levels of professional competence. Additional specialised external courses during the apprenticeships do not have any measurable positive effect on the quality of apprenticeships, nor does a higher amount of time dedicated to in-house instruction if these measures constrain the amount of time used for learning in productive as well as qualifying work processes. Here, a good portion of the companies taking part in the self-evaluation still show some potential for development.

In terms of the relationship between quality and cost-effectiveness of apprenticeships, one result of our analysis may be particularly interesting: we found a direct

connection between apprenticeship quality and cost-effectiveness. The higher the apprenticeship quality, the higher the cost-effectiveness.

A previous survey in the German automotive sector showed that raising the level of apprenticeship quality did not have any negative effects with regard to apprenticeship costs (Wirtschaftsgesellschaft des Kraftfahrzeuggewerbes, 1998). The QEK results not only support this evidence, but even suggest a positive correlation between quality and cost-effectiveness. High-quality apprenticeship does not only benefit the apprentice, it is even rewarding for the company in purely economic terms. And this effect does not only result from the relation between cost-effectiveness and the quality criterion 'work process learning' (which relies on productive work and learning). Rather, correlations between competence development, occupational commitment and the ability to carry out work tasks independently combine a high degree of performance capacity. If in the course of the apprenticeship this capacity is used for training by work and learning tasks, good results arise for costs and returns as well as for quality.

Many companies still have to catch up regarding the development of quality as well as cost-effectiveness. Factors that play a major role here and can be influenced by the companies are e.g. the amount of specific internal and external training courses, the amount of time to prepare for the examinations, and the amount of time for the examinations themselves.

15.5 Conclusions

The results of the self-evaluation by means of the QEK tool show that it is beneficial for enterprises to invest in the quality of their apprentice training programmes. This leads to a number of conclusions and recommendations for trainers and human resource managers in enterprises as well as for experts in other VET institutions.

15.5.1 Learning in Qualifying Work Processes

The QEK study has confirmed that the strong point of dual vocational education and training is the fact that the training companies give their apprentices the opportunity to work on real business tasks from the very beginning of their traineeship. In this process apprentices are increasingly given responsibility for the quality of their work, the punctual delivery of results and the economical use of resources. This also requires that work experience be reflected and communicated with colleagues, work superiors, trainers and other apprentices.

Vocational learning means integration into a professional community of practice through the increasingly responsible participation in the fulfilment of professional tasks. In order to develop professional competence on the basis of reflected work experience, the vocational school is called to build on the experiential knowledge of the trainees, and to systematise and generalise this knowledge. Accordingly the cooperation of learning venues essentially means the transformation of reflected

work experience into general professional knowledge as basis of professional competence. The implication is that the time available for learning in the training enterprise – the amount is on average 140 days per year – should be used for learning in qualifying work processes.

15.5.2 Novices Become Experts

Vocational education is a development process by which apprentices (novices) turn into professionals (experts). The development of professional competence presupposes that the professional assignments and orders that are delegated to the learner have the potential of development tasks. These are work tasks that challenge and motivate the learner to learn by mastering new tasks.

Therefore a training that is merely practice-oriented is not enough. What is crucial is the quality of work tasks. Tasks at the level of unskilled or semi-skilled work as well as routine tasks have little or no potential for development. The QEK study shows that many enterprises still have a considerable potential for improvement in this regard, which is used only inadequately. Often too little is demanded of first year trainees, in particular, and they are frequently charged with unskilled tasks. The disadvantages not only for the apprentice, but also for the enterprise are obvious. The development of the capacity to carry out more sophisticated tasks independently is delayed. Therefore, as a rule, work assignments should be structured so as to challenge the trainees according to their developmental stage. The coherence of the work process should always be maintained. This supports context awareness, work motivation and quality awareness.

15.5.3 Every Job has its Customer

Work assignments are embedded into business processes that are organised by the enterprise in such a way that the results satisfy the customers or clients. The earlier, and the more comprehensively, apprentices learn to understand, carry out and evaluate their professional work as part of these business processes, the more effective is the training. Imparting isolated skills abstracted from the operations of the company is a feature of a training tradition that shows only little effectiveness. To be sure, there are manual and cognitive skills whose acquisition needs some exercise. But even of those it is true that they can be learned best when the learning opportunity is derived from the context of a project or an order. Only then apprentices know to which end they acquire a particular skill or competence.

15.5.4 The Trainers and Tutors

In the craft trades it has been a tradition that apprenticeships should as soon as possible become colleagues of the master and the other craftsmen by being entrusted

with increasingly demanding work tasks. The role of the trainer is therefore primarily based on the responsibility for the training process assumed by skilled workers in their productive work. Accordingly the communication between the workers who train and the apprentices should resemble the communication between professionals and colleagues as soon as possible. Didactical instructions, which are commonplace in course-based training, are often overestimated as regards their effectiveness. It is therefore no surprise that the QEK study identified a high quality of training particularly in those enterprises which cultivate a developed communication and cooperation between all employees, including the apprentices.

15.5.5 Occupational Commitment

A crucial indicator for good vocational education and training is a high occupational commitment of the apprentices. A lack of occupational commitment is usually associated with an inadequate competence development. The QEK study has identified interesting connections in this regard. The development of occupational commitment is very closely connected to other quality factors, namely

- sophisticated work tasks,
- a high level of business process orientation and
- the transparency of the work context.

These factors have a positive effect on occupational commitment. If the apprentices lose sight of their training objective, their profession and their work context, their interest in the training also declines. As a consequence the occupational commitment decreases as well.

15.5.6 Evaluating Professional Competence

Training regulations increasingly stipulate that the professional competence of trainees must be assessed on the basis of real company orders. This method makes sense as it recognises one major principle of dual vocational education and training: professional skills and professional competence can be tested only contextually, that is, in a real work context. Professional knowledge, on the other hand, which explains and rationalises actions, can also be assessed by means of written exams that abstract from the situation in the training company. The results of the QEK study therefore suggest the establishment of assignment-oriented assessment methods. The examination on the basis of work assignments in the company is an appropriate way of evaluating professional competence, and it is also an opportunity to avoid unnecessary preparatory phases for external practical ‘tests’. An assignment-based examination therefore renders unnecessary a large part of the extra time normally used for the preparation before the final examination.

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