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ABSTRACT

These proceedings are comprised of 23 presentations on research in European vocational education and human resource development. Papers include "Developing Information and Communication Technology Capability in Higher Education in the United Kingdom (UK)" (Nick Boreham); "Methodological Issues in the Study of Organizational Learning, with Reference to the Framework V Project ORGLEARN--Organizational Learning in the Chemical Industry and Its Implications for Vocational Education and Training (VET)" (Nick Boreham); "Forms and Implications of Work Related Identity Transformation: Preliminary Findings of "FAME" Project Investigation in the French Case" (M'hamed Dif); "Promoting Social Capital in a 'Risk Society': A New Approach to Emancipatory Learning or a New Moral Authoritarianism?" (Kathryn Ecclestone, John Field); "The Value of a Three-Year Upper Secondary Vocational Education in the Labor Market" (Erika Ekstrom, Asa Murray); "Taking Control of Their Lives? Agency in Young Adult Transitions in England and the New Germany" (Karen Evans); "Tacit Skills and Work Inequalities: A UK Perspective on Tacit Forms of Key Competences and Issues for Future Research" (Karen Evans); "Does Training Have Any History? The Enduring Influence of Behaviorism in Britain, 1940-1966" (John Field); "Training Policies Valuation in European Enterprises by Studying the Valuation Practices/Comprendre les Politiques de Formation d'Entreprises Europeennes par l'Etude de Leurs Pratiques d'Evaluation" (Gerard Figari et al.); "Work Process Knowledge in the Context of Socio-Technical Innovation" (Martin Fischer); "'I Couldn't Wait for the Day': Young Workers' Reflections on Education During the Transition to Work in the 1960s" (John Goodwin, Henrietta O'Connor); "Typology of Work Experience: Analysis of the Workplace Training Process in Quebec" (Marcelle Hardy, Louise Menard); "Apprenticeship in France, Ireland,

the Netherlands, and Scotland: Comparisons and Trends" (Jannes Hartkamp); "Gender and Qualification: Are Gender Differences Ignored?" (Anke Kampmeier); "From Normatively Constructed Identity to New Identities in the Contexts of 'Double' Transition Processes. The Case of Estonia" (Krista Loogma et al.); "The Consideration of Relevant Features for the Processes of Identity Formation in Current VET Policies" (Fernando Marhuenda); "The Hidden Labor Market of the Academic" (Anne Rouhelo); "Developing a Model of Factors Influencing Work-Related Learning: Findings from Two Research Projects" (Sally Sambrook); "Transition from Higher Vocational Education to Working Life: Different Pathways to Working Life" (Marja-Leena Stenstrom); "WEPP--The Work Environment Pedagogy Project: Individuals' Discovering, Interpreting, and Changed Perception of Work and Learning Environments" (Arvid Treekrem); "Continuing Vocational Training in Belgium: An Overview" (Els Vanhoven, Dirk Buyens); "Training Incidence and Job Mobility in Switzerland" (Stefan Wolter); and "The Role of Human Resource Development in Creating Opportunities for Lifelong Learning: An Empirical Study in Belgian Organizations" (Karen Wouters et al.). (YLB)

VETNET ECER 2001 Proceedings

Current Research in European Vocational Education and Human Resource Development

Proceedings of the programme presented by the research network on vocational education and training (VETNET) at the European Conference of Educational Research (ECER) in Lille, 5-8 September 2001

Sabine Manning & M'Hamed Dif, Editors

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- **Boreham, Nick**. Methodological issues in the study of organisational learning, with reference to the Framework V Project ORGLEARN.
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Developing ICT Capability in Higher Education in the UK

Paper presented to the Annual Conference
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Abstract

In 1997, the Dearing Report on Higher Education recommended that all students in higher education should be taught generic skills in information and communication technology (ICT) to prepare them for employment. This paper considers some of the changes in graduate employment which have been brought about by the widespread introduction of ICT into the workplace. It then reports a survey of how students' ICT capability is being developed in 22 higher education courses in 15 higher education institutions, covering all the major subject areas. Four different ideal types of curriculum are proposed, to explain the variety of provision. Only one of them seems likely to fully achieve the task set by Dearing of preparing students for employment in the information society.

1. The Dearing Report on Higher Education, the knowledge-based economy and the impact of information and communication technology on graduate employment

In 1997, the Dearing Report (National Committee of Inquiry into Higher Education) recommended that all students in higher education should be taught generic skills in information and communication technology (ICT) to prepare them for employment. This recommendation is an acknowledgement of the impact which ICT is having on employment, and it raises the question of how the teaching of ICT capability can most effectively be incorporated into the undergraduate

curriculum. There has been very little public debate on the kind of curricula and teaching methods which are most appropriate for preparing higher education students for future employment in the information society, and also very little empirical research on how higher education institutions are approaching this task (apart from an important body of work in teacher education). There is consequently an urgent need for research, reinforced by anecdotal evidence that, whilst almost all degree students in the UK have access to some form of training in ICT, there is a surprising variety of approaches. For example, it appears that in some higher education institutions, ICT provision is integrated into the degree course, whilst in others it is a free-standing module with no links to the students' main subjects. Some course providers claim to be teaching transferable key skills, whilst others restrict themselves to the subject-specific uses of ICT. In some institutions, ICT skills are formally assessed, but in others they are not assessed at all. Moreover, when formal assessment does take place, in some institutions the marks are incorporated into the overall degree result, whilst in others a separate certificate in ICT is awarded.

It is important to spend some time analysing the key phrase in Dearing's recommendation - "to prepare students for employment". In recent years, the nature of graduate employment has changed radically, as a result of a number of changes in the economy including the widespread use of ICT in sectors ranging from manufacturing to public services. The background to these changes is the growth of the *knowledge-based (or learning) economy* (Goddard, 1992; Lundvall and Johnson, 1994; Lundvall and Nielsen, 1999; OECD, 1999). This term refers to

- the value which can be added to production or services by drawing on the accumulated knowledge of employees;
- the increased codification and commercial exploitation of knowledge, such as the creation of expert systems and the construction of customer data bases;
- the assertion by companies of proprietary rights over employees' knowledge, the recognition of this knowledge as an important asset which needs to be managed and the emergence of employee knowledge as a contested area in employer-union negotiations.

The new (or more accurately, accelerating) emphasis on the commercial value of knowledge has been attributed to the liberalisation of international trade and financial markets, which requires firms to innovate if they wish to survive. As Nonaka and Takeuchi (1995) argue in their influential book *The Knowledge Creating Company,* innovation depends on the ability of a firm to acquire, generate and disseminate knowledge internally. As Bohme (1997) puts it, knowledge is a productive force and a major sector of the economy in its own right. In consequence, argues Wilke (1998), a revision of the theory of the firm is needed to take account of the extent to which knowledge has become a critical factor in industrial production.

Before considering how to teach students ICT skills "to prepare them for employment," in such an environment, it is necessary to understand the role of ICT in these developments. The conjunction of the two technologies of telecommunications and computing to create ICT has provided a powerful tool for exploiting the commercial and productive capacity of information. The networking of computers through telecommunications links is often compared with the provision of electricity - just as the energy grid links every home, office and factory, so the information grid offers access to information whenever and wherever it is needed. In a recent survey, Ducatel (1994) showed that the capacity of ICT for collecting, storing and processing large quantities of information, and the fact that it can be re-programmed for new operations without the need for additional capital expenditure, are having widespread effects on the organisation of working life for

many people.

Referring to the impact of ICT on the world of work, Casey (1995) identifies changes on two levels. The first consists of more readily observable changes such as automation and the use of ICTs in the production of goods and services. In human resource terms, these require new occupational profiles and new organisational structures, which are eroding the traditional kinds of graduate employment. However, the second level of changes affect what is valued. Among the most significant effects is the 'commodification of knowledge' (Lyotard, 1993). Knowledge and information are increasingly treated as goods which are tradable, and therefore subject to the mechanisms of the market. One result of this is the recognition that knowledge has a limited shelf-life. Consequently, there is a shift away from the concept of education as a distinct period of one's life in which one absorbs a given body of knowledge, and a new emphasis upon lifelong learning, incorporating periods of study as career and work demands dictate. Because the traditional three-year degree course always played the role of the 'distinct period in one's life where one absorbs a given body of knowledge', the advent of lifelong learning as the new basis for employment in the knowledge economy presents yet another challenge to traditional patters of graduate employment.

To gain insight into the new kinds of employment which HEIs should be preparing students for, it is essential to consider how applications of ICT in the workplace are altering the nature of work itself. The commercial value of ICT for exploiting information has already been mentioned. Zuboff (1988) argues that ICT can be used to increase the intellectual content of work at virtually every organisational level, challenging the distinction between manual and mental work embedded in the Taylorist system of industrial bureaucracy. ICT can do more than automate - it can informate. Because it captures data generated by the work process itself, it can reveal the processes that were once deep in the minds of the workers and their customers. It provides information about the underlying production and administrative processes through which an organisation accomplishes its work, giving transparency to activities once partially or completely obscured.

Other commercial advantages include the fact that ICT enables companies to disaggregate their operations and distribute them to less expensive locations, or to outsource to low-cost satellites, a trend which began with banks and insurance firms. ICT has also created the new role of teleworker, someone who works from home with ICT. Increasingly, this is an option not only for professionals but also for clerical workers doing word processing and data processing.

To fulfil the potential of ICT in these contexts, it is increasingly accepted by managers that jobs should be re-designed to give employees the opportunity to exercise more initiative; to allow them to interpret the data ICT provides; and to support them in making informed decisions based upon that information. With the mushrooming of service sector employment in telecommunications and the decline of manufacture, many jobs requiring 'traditional' or hard skills have been replaced by jobs requiring soft, people-related skills. This in turn requires employees to develop new constellations of aptitudes, and abilities which are transferable to a wide range of tasks. Work competencies are thus being re-defined in a fundamental and far-reaching way. As a result, assumptions are changing about what it is to be a literate or educated person. No longer is this to possess a certain body of theoretical knowledge and a formal qualification, as provided by the traditional university degree course. Rather, as electronic media take over from reference

books, employment in the knowledge economy becomes a matter of knowing how to access appropriate data-banks, retrieve pertinent information from them and communicate it to others (Lyotard, 1993; 51).

In summary, the world of work into which Dearing's graduates will move is being transformed in many ways. ICT is a catalyst which has enabled companies to reorganise their operations, generally in the direction of more flexible types of employment, more intensive work and organised around more communication interfaces. Whilst the use of ICT to process data is important, preparing students for employment in the information society requires more than data processing skills. Rather, the need is the broader one of *enabling students to become employable in contexts into which ICT has been introduced* as part of a strategy to make firms more competitive in the knowledge-based economy. As indicated, this requires a new constellation of 'soft skills'.

2. The aims of the research

Against this background, the aim of the research was to survey current approaches to teaching ICT capability to students at first degree level. Two aspects of this are considered particularly important.

First, there is a need to explore the different concepts of competence, capability, generic skill, etc. on which the provision is based. Loveless and Longman (1997) have already pointed to the wide variety of definitions of ICT capability in current use. The many meanings of this term can be arranged on a continuum. At one extreme, Selwyn (1997) argues that ICT capability should be construed as one dimension of a person's participation in the information society. At the other extreme, Webster and Webster (1995) argue that ICT capability should be defined in terms of skills in operating ICTs. The UK National Curriculum and the Key Skill Unit in Information Technology both tend towards the latter end of the continuum. However, virtually nothing is known about what meaning universities are assigning to competence in this context.

The second major issue requiring research is the Dearing Report's insistence that the teaching of ICT skills in higher education should "prepare students for employment". The difficulty of implementing this recommendation arises from the loose coupling which often exists between degree subject and employment - for example, a physics graduate might join the police, or an economist become the assistant editor of a fishing magazine. It is difficult, therefore, to pin down the precise "needs of employment" that a particular degree course should satisfy. The picture becomes even more cloudy when we consider the structural changes that are taking place in the graduate labour market, which were discussed in the previous section. As a result of the increased flexibility of the labour force, a significant decline has occurred in graduate recruitment programmes as many of the middle management positions traditionally occupied by graduates have disappeared. Many graduates now work in new kinds of ICT-rich workplace (such as call centres) - but not always in a recognisably "graduate" capacity. Indeed, the very concept of graduate employment is fast disappearing: university careers advisers are beginning to define it as "the employment which graduates go into" (personal communication, University of Manchester Careers Service). The question then arises of how far degree courses are recognising these fundamental changes and taking them into account when teaching their students about ICT.

3. Methods

3.1 Research design

The specific objectives of the research were:

1. To explore the diversity of provision relating to ICT in a representative range of first degree courses in higher education, by means of a set of case studies.

2. To analyze the range of curriculum models underlying the diversity of this provision, with particular reference to assumptions about (1) the nature of ICT capability and (2) the way courses should be linked to the graduate employment market.

Twenty-two case studies were carried out of the ICT provision within first degree courses (or equivalent qualifications, such as a course in a theological college leading to ordination). Each case study surveyed the whole range of provision available to students on the course (such as courses offered by the library), not just the module or modules formally identified as instruction in ICT.

3.2 Sample of courses

The sampling was purposive, and was designed to include a full range of the degree subjects listed in the Higher Education Statistics Agency's classification of courses (Table 1):

Table 1
Higher Education Subject Areas Investigated *

Arts
Modern Foreign Languages**

Social Sciences
Psychology
Sociology

Technology
Mechanical Engineering

Pure Science

Physics
Chemistry
Life Sciences

Subjects Allied to Medicine
Pharmacy
Physiotherapy
Nursing**

Helping professions
Counselling**
Religion**

Performing Arts
Drama
Music

Management Studies
Management**

Informatics/Computing
Information systems**

** generic titles are used in place of the more distinctive course titles now common in higher education, to preserve anonymity*
*** two courses were studied in each of these subject areas*

3.3 Sample of institutions

The institutions included in the research were located in northern England, the midlands and the home counties. They included further education (FE) colleges, which provide an increasing amount of higher education, and what we term specialist vocational colleges (such as colleges for public and emergency service personnel, drama schools, music conservatoires and theological colleges). Many of these colleges now award degrees validated by universities; as major providers of part-time, work-based and/or directly vocational higher education, it was essential to include them. The total number of institutions in the sample was 15 (Table 2):

Table 2
Types of Institution in the Sample

University	N=5

(of which 2 were "old" universities, 1 was a technological university and 2 were "post-1992" universities)

FE college N=5

Specialist college N=5

The distribution of courses across types of institution provided an equal split between university and non-university provision. Eleven of the 22 courses were studied in the five universities, and 11 in the non-university HEIs. In the latter group, six courses were studied in the five FE colleges and five courses were studied in the five specialist vocational colleges.

3.4 Data collection

The data were collected in visits to the institutions, where course documentation was examined and interviews were conducted with teaching staff. Information was gathered about the course structure, content, teaching methods, assessment and resources. The interviews with teaching staff also elicited the teachers' implicit models of their practice. According to Marland and Osborne (1990), personal theories encompass beliefs about the goals of education in general, intentions in the specific courses taught, conceptions of learning, knowledge of students, principles, tactics and models of classroom practice, occupational self-concept and perceptions of the dilemmas faced in day-to-day teaching. Similar models have been developed by Bussis et al. (1976), Elbaz (1983) and Calderhead (1987). The interviews conducted at each institution were based broadly on this conceptual framework, augmented by questions about ICT capability and how the course prepared students for employment. Staff were interviewed individually for between 45 and 90 minutes. All but one of the interviews were audio-recorded, with the prior permission of the interviewees, and the tapes were transcribed to disk for subsequent analysis. (One interviewee declined to be audio-recorded, but agreed that a shorthand-typist should make a verbatim record of the interview). Interviewees were asked to:

- describe the ICT provision within the degree course, and give an account of the coverage of ICT in other parts of the degree course and provision outside the department (e.g. library courses);

- explain their understanding of "ICT capability" or "competence";

- say how much weight they placed on different possible objectives of ICT provision;

- indicate what jobs their graduates went into, how ICT was affecting those jobs, and what ICT skills employers were asking for;

- describe their students' levels of computer literacy and computer anxiety on entry, and what remedial provision was offered;

- assess the adequacy of the resources at their disposal, including budget, equipment and

staffing;

- describe what formal evaluations had taken place and how they had responded.

3.5 Analysis

After the interviews had been transcribed, they were analyzed to identify "ideal types" of curriculum. Ideal types are defined as "interpretative or explanatory schemas which establish subjectively meaningful connections between different aspects of a phenomenon" (Hempel, 1965, p. 162). The typology which resulted from this analysis contained four different types, indicating the variety of provision currently found in higher education institutions. The typology is intended to clarify the different concepts of ICT capability which underpin the variety of provision, and the different assumptions about the way courses should be linked with students' future employment. The typology thus provides a conceptual tool for evaluating how higher education is measuring up to the Dearing Report's recommendation that students should be taught generic skills in ICT to prepare them for employment.

4. Results

4.1 Ideal Type I - to produce graduates who can function fully in the information society

The Type I curriculum is based on the principle that higher education should prepare students to become fully functioning members of a society in which citizenship and working life are being transformed by ICT. This implies achieving more than the limited instrumental objective of operating hardware and running software packages. Rather, the aim is the broader one of general education for informatisation (Lyman, 1995). As one interviewee stated:

"We don't train them in any one package. It's not a training course. More of our aim is for students to understand the capabilities of packages... " (Information Systems)

This type of curriculum stands apart from the others in many ways, but one striking difference is that the Type I curriculum stresses the *cognitive* objective of acquiring knowledge about the impact of ICT on work and society, and the *moral* objective of becoming aware of the ethical implications of the information revolution (such as the threat to privacy, the power which ICT gives governments and corporations and the effects on social exclusion). In contrast, the other types focus on *skill* objectives.

Type I provision was found in only three of the courses studied in this research, a psychology degree which offered an elective module on "Computers and Society", and the two courses on informatics/computing. It was not available to students in the overwhelming majority of the courses studied. To find more examples of this approach, it is necessary to look at the USA, where some colleges which provide a broad liberal education have attempted to integrate ICT capability into all aspects of their programmes. For example, one college has a fully integrated undergraduate curriculum which combines a broad liberal education with a preparation for careers

in the helping professions, business, law, etc. The programme aims to develop abilities such as "communication", "analysis", "problem solving", "effective citizenship", "global perspectives" and "valuing in decision making". ICT capability is an important part of the course. However, it is not an end in itself. Rather, it is a means for achieving the broader objectives listed (personal communication, college staff).

Many American colleges report difficulties in integrating ICT provision across the whole degree programme. For example, the cost of installing back projectors in all classrooms can be prohibitive, and there is widespread reluctance among academics to incorporate ICT applications into their regular teaching (Ferren, 1993). Moreover, when ICT provision is integrated into a degree course, problems may be encountered in co-ordinating the different modules (Al-Dahhan, 1995). The aim of integrating ICT into a broad liberal education curriculum thus poses practical difficulties for the course provider.

However, the type I curriculum can be found in US colleges which do not have integrated curricula. This takes the form of a modular course structure where modules on advanced computer programming, system configuration, etc. are available to undergraduates in all subjects. The rationale is that all graduates need to become "power users" and knowledgeable about the impact of ICT on society so that they can fashion ICT into a tool to achieve their goals as workers and citizens. In contrast, our investigations of the 15 UK HEIs in the present research indicate that advanced courses of this kind tend to be restricted to students taking specialist degrees in computing.

4.2 Ideal Type II - to provide graduates with a key transferable skill - data processing with the new technology

Like the Type I curriculum, the Type II approach aims to prepare students for a future that has been changed by ICT. However, it has a more restricted objective - to teach the skills of data processing with IT (sic). This curriculum focuses on skills for operating the new technology; it does not deal with the wider range of knowledge and ethical awareness developed by the Type I curriculum. Moreover, it restricts itself to information technology at the expense of communication technology.

The central concept underlying the Type II curriculum is the "key transferable skill." On its current Web Site, the Department for Education and Employment (DfEE, 2000) defines key skills as:

"those generic skills which individuals need in order to be effective members of a flexible, adaptable and competitive work force ... The Government sees Key Skills as a priority and wants to move as soon as possible to a position where Key Skills are a normal part of everyone's post-16 education and training. Currently, Key Skills are developed through the national curriculum pre-16 and are integral to many post-16 education and training courses e.g. the GNVQ (General National Vocational Qualification) ... Increasingly Universities include Key Skills as part of both entry and course requirements".

Two ways of implementing the key skills curriculum were identified in this research. The

first was to offer the national IT Key Skill Unit as part of a degree course. The objectives of this unit are to use new technology to prepare information, process information and present information, and to be competent in evaluating the suitability of IT for data processing requirements. This is a much narrower concept of ICT capability that adopted by the Type I curriculum. Nevertheless, learning in the workplace is mandatory in the Key Skill Unit in IT, and achievement is assessed on the basis of a portfolio of work-based projects (moderated by an external awarding body). A close link with employment is thus assured, and a nationally-recognised certificate is gained, although the work experience on which the learning and assessment are based can be narrow.

Instead of the Key Skill Unit, some institutions based their provision on the European Computer Driving Licence (ECDL) or the Royal Society of Arts' CLAIT Certificate (Computer Literacy and Information Technology). Examples were also found of institutions which based their provision on the concept of an IT key skill, but did not offer one of these national key skill qualifications. One example is a psychology course in which the tutor defined the aim of the ICT teaching in the following terms:

"A majority of psychology graduates don't go into psychology. What we have told them is that if you can use a computer you have a head start ..[one] of the things employers like is your ability to seek sources of information, collate it, distil it, order it. It's evidence, usually - that's the most generic term - it may be numerical, it may be textual. 'Here's a big tool, it used to be a fountain pen, now you've got computers'. It's the most transferable skill, preparing them for the occupations they will eventually take up. "

S/he gave the following example:

"I can think of one [graduate] who is now in social services. She goes out with a laptop and she has basic client information on the laptop - she doesn't use a notebook any more. Another went out as a market research interviewer and she used to have a clipboard. Now she has a laptop, all the questions are on proformas and the data is downloaded at the end of the day. So these jobs are changing, that is the tools of the trade, and you couldn't do it without being able to use a computer. So there are areas of work open to our graduates which might not have been open to them before, simply because they have got ICT skills."

4.3 Ideal Type III - to initiate students into an academic discipline which makes use of ICT

In the Type III curriculum, students acquire ICT skills by studying a discipline which has already incorporated ICT into its normal practice - for example, in engineering, computers are used to analyze data and in psychology, computers are used to present stimuli to subjects in experiments. While the two previous curriculum types aim to develop "generic" skills, albeit in different ways, the Type III curriculum focuses on subject-specific skills.

Type III thinking was evident in a degree course on music. The course director was adamant that there was no need to develop generic skills in ICT:

"Most of this is completely irrelevant ... it's at best ancillary."

When asked "What about things like Microsoft Office .. using a data base, spreadsheet? Do you envisage teaching those?" s/he replied:

"I don't deny that those are useful, transferable skills. No doubt they [would] draw on them once they have graduated, but I don't see they would form part of what we currently do. If we had time, we could do more of those business organisation, outside world-type courses. But currently, we don't have time."

S/he even questioned the wisdom of permitting students to wordprocess their essays, and condemned the World Wide Web as a source of plagiarised essays.

Nevertheless, as the interview continued, it emerged that ICT is making an impact on music, principally in the fields of musicology and composing. Despite the course director's unwillingness to teach generic ICT skills, provision was made for some students to acquire music-specific ones. There was an option to study composition as a principal subject, open to a minority of entrants selected for their potential to become composers. As most professional composers use ICT packages, the relevant software was provided for the students. The course director explained:

"As an integral part of their training, we work on a system which is called Sibelius 7 ... in their one-to-one lessons ... We have two computer studios, designated just for principal study [composition] students with Sibelius 7 and MIDI musical input and playback facilities."

Another example of the Type III approach was found in an engineering course which teaches calculus and linear algebra using computing packages designed for solving engineering problems with numerical methods. Engineering students are also typically taught to solve engineering problems through the medium of FORTRAN programming.

The main question raised by the Type III curriculum is its adequacy for preparing students for the way ICT is used outside the degree subject. The limits of the discipline become the limits of the graduates' ICT capability; arguably, both FORTRAN programming and Sibelius 7 have limited applications. It is, of course, possible that the ICT capability acquired by mastering specialist packages such as these is transferable. However, none of the staff interviewed during the project claimed this.

4.4 Ideal Type IV - to provide study skills to enable students to survive a degree course in which the wordprocessing of essays is compulsory, the library catalogue has been computerized, hard copy bibliographies have been replaced by electronic data bases, etc.

The Type IV curriculum provides study skills which will enable students to deal with the increasing range of degree course assignments which require ICT. Capability with ICT is defined as the ability to wordprocess essays, use the electronic library catalogue, maintain e-mail contact with tutors, and so on. The aim is to enable students to survive their course; there is no explicit intention to prepare them for employment or citizenship in the information society.

The majority of the courses investigated in this project designed their ICT provision in this way. For example:

"The primary objective of the [IT] course is to enable students to utilise campuswide computer services, and this will be achieved by providing students with the skills to prepare essays and reports using wordprocessors and enable them to communicate with tutors and classmates via e-mail. [Researcher: Could you give examples of lack of capability?] If they didn't achieve that, they wouldn't be able to do literature searches for their tutorials ... if they didn't progress on the IT course, they wouldn't be able to do the rest [of the degree course]." (Pharmacy)

"... we show them how to use it [e-mail] with the departmental network and emphasise that it is a very important tool for communication with tutors as well with each other ... The tutor also introduces them to some on-line services. So they get to know how to search the library catalogue, and ... how to use the various bibliographic tools." (Psychology)

The Type IV curriculum defines ICT capability in terms of course requirements:

"[ICT capability is] to be able to wordprocess their assignments, and that to me, here, is all - they don't really need any more than that." (Nursing)

Much of this kind of provision was offered outside the department, often as a service course for students from a range of Departments and Faculties. The instrumental nature of the teaching is illustrated in the following quotation:

"They tend to come when they need to know something ... for instance, all the third years came to the spreadsheets because they knew they were going to need spreadsheets in a few weeks' time ... they do tend to come on this ad hoc basis." (Physiotherapy)

Sometimes, course providers did not make a clear distinction between computer based learning (CBL) and the Dearing Report's idea of teaching students generic ICT skills to prepare them for employment. They interpreted the researcher's enquiries about ICT provision as referring to the need to train students to use CBL packages. For example:

"We have intensive courses in developing aural training. They have classes in that every week, but it's the sort of activity which needs more regular practice ... there are now quite a lot of very useful ear training software packages, mostly developed in the United States, some in Australia, and when we have sufficient machines in the library we will be able to use them ... " (Music)

5. Discussion

The proposed typology of curricula provides a conceptual framework for ordering and interpreting the diverse range of ICT provision found in the 22 courses studied. It is arranged in decreasing breadth of the objective of the provision: in Type I, the objective is to prepare students for the information society; in Type II, to prepare them for data processing with the new

technology; in Type III, to introduce them to an academic discipline which includes specialist applications of ICT; in Type IV, to help them meet current course requirements.

Are there intrinsic differences in quality between the different curriculum models? The ways in which ICT is impacting on employment, reviewed in the first section of this paper, suggest that the 'generic skills' needed in employment are those addressed by the Type I curriculum. The impact of ICT on work goes far beyond the requirement to use computers for data processing (Boreham and Lammont, 2000). Most employees in informated work environments carry out a range of ICT-related activities which do not require the direct use of new technology. For example, ICT makes it possible for organisations to distribute their operations across a network, replacing hierarchical communication by lateral communication. In these contexts, the technical skill of using information tools (such as Lotus Notes) may be less critical than "soft skills" such as sharing knowledge through a computer network.

The ways in which ICT is being used by firms to increase competitiveness and innovation suggests that the differences between the abbreviations "ICT", "IT" and "CT" are significant. The term IT is used when competence is defined as the ability to operate computers and utilise software packages, as in the Type II curriculum. However, it could be argued that the concept of CT - communications technology - puts the emphasis in a more appropriate place because the communicative aspect of the new technology is economically and socially more important than its capacity for processing data. Contrary to the current orientation of the National Curriculum and the Key Skill Unit in IT, this implies that technology such as telephones and video conferencing systems are more important than microprocessors.

For these reasons, the typology provides a yardstick for evaluating ICT provision against Dearing's recommendation. As indicated, curricula of Types I and II address the recommendation of the Dearing Report directly, although the first approach is more far-reaching than the second. However, the other two curriculum types have clear limitations, at least from the perspective of preparing students for the information society. The Type III curriculum provides discipline-specific ICT skills, but because many - if not most - graduates take up careers outside their disciplines, its usefulness seems limited (for example, only a small percentage of psychology graduates follow careers as academic, educational or clinical psychologists). The Type IV curriculum makes no explicit attempt to develop employability at all. While cautioning the reader that the sample was purposive and not random, it is worth reporting that the majority of the 22 courses investigated reflected the Type IV philosophy.

6. Acknowledgements

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Network 2
Network on Vocational Education and Training

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Methodological Issues in the Study of Organisational Learning, with reference to the Framework V Project ORGLEARN - Organisational Learning in the Chemical Industry and its Implications for Vocational Education and Training

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1. The ORGLEARN project

The economic background to the ORGLEARN project is the restructuring of the European chemical industry over the last few decades, in reaction to a series of shocks including the oil price rise of the 1970s, the recessions of the 1980s and 90s, a steady fall in demand for chemical products, competition from abroad (especially the new chemical industries in the Pacific Rim) and the demand from governments and political pressure groups for improvements in health, safety and environmental protection. Many changes have taken place in the chemical industry during this period. They include takeovers, downsizing, portfolio rationalization and, in the field of human resources, delayering, outsourcing, a broadening of work roles through multi-skilling and the adoption of increasingly flexible working practices. In many companies, the policy has been adopted of promoting learning at all levels, particularly by involving the whole workforce in the continuous improvement of production processes, and in the pursuit of higher standards of safety and environmental protection. The new emphasis on learning within companies stresses that it is a collective as much as an individual process. In recognition of this, the Framework V project ORGLEARN (co-ordinated by Martin Fischer of ITB Bremen, Germany) is investigating the nature of organisational learning at four major industrial sites of the chemical industry in Europe – situated in Germany, Belgium, Italy and the UK. Details of the project can be found at the project website
http://www.itb.uni-bremen.de/projecte/orglearn In outline, its aims are to clarify the concept of organisational learning in this context, and to examine the interrelationship between vocational training, human resource development, economic competitiveness and organisational learning in the enterprises concerned. Among other issues, this focuses the research effort on:

- the acquisition and determination of new vocational competencies;

- what competencies are required from employees to participate in processes of organisational learning;

- what competencies the employees actually acquire in the framework of strategies of organisational

learning;

- what role training plays as a prerequisite for organisational learning;

- best practice for organisational learning in the European chemical industry.

Among the intended outcomes of the project are case studies of organisational learning in the European chemical industry to illuminate different perspectives on organisational learning of the major stakeholders (employees, company representatives, representatives from research, politics and the formal education system), and the requirements, activities and consequences of organisational learning. The project also aims to improve the processes of organisational learning in the enterprises involved. The intended project outcomes will therefore include recommendations for shaping organisational learning in the light of European policies for personnel development, vocational education and economic competitiveness.

The project is funded from March 1 2000 to February 28 2003. The partners are the Institut Technik & Bildung at the University of Bremen (which is co-ordinating the project), the Multimedia Communications Laboratory at the University of Siena, HIVA (The Higher Institute for Labour Studies) at the University of Leuven and the Institute of Education at the University of Stirling, Scotland.

2. The methodological problem

A debate on organisational learning has been taking place since the 1970s, and references to this topic can be found even earlier. All this activity has generated an extensive literature, the number of books now in print reaching a truly impressive total. Over the last five years, the number of papers on organisational learning appearing in academic journals has risen steadily, and numerous authoritative literature reviews have appeared. However, most of this work reflects the perspective of management consultants and business school professors; although the central concept is 'learning', relatively little research activity has taken place in the educational community. For example, there has been relatively little research into the learning experiences of the process operators, production unit managers, shift supervisors and other employees who are supposed to be engaging in organizational learning. Moreover, the literature is predominantly normative in approach, recommending organisational learning as a management tool which can help managers improve the performance of their businesses. There has been less attention to important theoretical issues such as how organisational learning differs from individual learning. Also urgently in need of examination are value issues, such as the question: Who benefits from organisational learning initiatives being implemented in many companies?

The aim of the present paper is to discuss some of the methodological issues in researching organisational learning in this context, with specific reference to the project ORGLEARN. Within the discipline of industrial psychology, research on training in the workplace has tended to stress the behavioural aspects of learning. Thus in the process industries, researchers have tended to concentrate on perceptual and motor skills such as the field operator's vigilance and the process operator's ability to recognize patterns on the control room display. The ORGLEARN project, however, does not regard this approach as adequate for investigating the nature of organisational learning. In agreement with writers such as Schein (1992), the project construes the fundamental process in organisational learning as culture change. Schein defines culture as 'a pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think and feel in relation to those problems'. The relationship between culture and behaviour is put neatly by Schein when he states that what an organisation can or cannot do depends on its culture, and that what individuals can or cannot do depends on the extent of their socialisation into that culture. At one level, a learning organisation will be characterized by continuous skill acquisition at all levels, a process that can be demonstrated by changes in behaviour such as reductions in the frequency of accidents and spillages. However, these are the results of learning, not the process of learning itself. To understand fully the nature of the organisational learning that is occurring in the chemical companies under investigation,

it is necessary to study culture change processes directly. These are the intangible but nonetheless real processes through which the organisation as a whole makes its hidden assumptions explicit, challenges them, involves individuals in collective activity, and creates new norms and expectations about how members of the organisation should relate to each other and to the artifacts in the workplace.

3. Identification of organisational learning practices

A central concept around which the ORGLEARN methodology is organized is that of social practice – that is to say, the embodiment of the culture of the workplace in a number of distinct procedures, customs and rituals through which the work is carried out. The project is therefore focusing on a number of what might be termed *organisational working and learning practices*. This term refers to the social practices by which an organisation incorporates learning into the process of working, which lies at the heart of organisational learning.

Accordingly, the first stage of the research project (after completing the mandatory literature review) has been to investigate organisational working and learning practices in the four participating companies. About 15 of these practices have been identified in the four companies, some of which occur on several sites, and some of which appear to be unique to one site.

Examples of working and learning practices include the following:

Participative work redesign projects, typically involving teams of process operators rewriting the manuals for standard operating procedures, which are organized to encourage learning from each other and sharing that learning with other employees;

Adoption of teams as the modus operandi for almost all tasks, supported by training in problem solving and facilitation of group learning to create a culture of continuous collective learning in the workplace;

Structured comparisons with other companies (e.g. through inter-site exchanges, benchmarking and audits) to promote reflection on existing working practices and the adoption of better ones.

4. The elicitation of personal accounts as the entry route to the private world of organisational learning

Culture is manifested in the network of meanings that are constructed as members of an organisation interpret each other's contributions to the collective activity we know as 'work'. To gain access to this world for the purposes of research it is necessary for the researcher to participate in the process of sense making in the context of work.

The constraints imposed on the project by the level of funding it receives from the European Commission, and the operational constraints encountered at the research sites themselves, make it impossible to carry out the in-depth ethnography traditionally used by qualitative sociologists to study culture and culture change. The solution to this problem adopted by the ORGLEARN project is to use the method of eliciting *personal accounts* as the crucial entry-point to the culture being studied. Personal accounts are elicited in open-ended one-to-one interviews in which employees of the chemical companies are invited to relate in their own terms their experience of being involved in the working and learning practices on which the research focuses. Each interview begins by reminding the interviewee how the company is responding to the challenges in the business environment mentioned in the first section of this paper. It then goes on to mention some of the working and learning practices that have been developed within the company to achieve the desired culture change. Interviewees are asked what their involvement in these practices has meant to them as employees of the company, and are asked how the culture of the company is changing. This is done by probing for their perceptions of changes in the expectations employees have of each other, changes in how people in the company think and act, and so on. Interviews last 45-60 minutes, and are audio-recorded for later

transcription. The aim is to generate 'thick descriptions' of the culture changes that are occurring within the organization.

5. Interpretation through the organization of *cultural exchanges*

It is a fundamental assumption of the qualitative methodology adopted by the ORGLEARN project that conclusions cannot be drawn by having the researchers analyze personal accounts in their raw form. Rather, their significance will be determined by presenting samples of text to the other members of the organisation, and inviting them to interpret them in the light of their own experiences. Thus segments of text recording what several employees have said about a particular working and learning practice will be collated and fed into one of the ordinary practices of organisational learning taking place within the company – for example, the organisation might be reviewing the practice in question, and will use the personal accounts for this process. Within the ORGLEARN project, these events are called 'cultural exchanges' and holding them is one of the central research methods of the project. The project plan envisages cultural exchanges at two levels, within-company and then between the research sites in the four countries. The conclusions of the research will fall out at each of these levels of enquiry – first, during the interviews, in the guise of reflection by individual employees, then as feedback for the company at the first level of cultural exchange, and then as feedback to the European chemical industry as a whole. The final stage will be when the researchers construe the complex, multi-level pattern of interpretations about the culture changes that are occurring within the industry in the light of the literature on organisational learning. This will constitute the findings which will be presented for publication in the social science literature, but the project does not claim that it represents a deeper level of truth than the other levels of interpretation. Rather, the ORGLEARN project sees itself as addressing different audiences of stakeholders by engaging in different discourses at different levels, all equally valid.

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Forms and implications of work related identity transformation:
Preliminary findings of "FAME" project investigation in the French case

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ABSTRACT

During the last three decades or so, work related identities inherited from the "fordist-economy", have undergone an important structural change leading to two basic developments. The decline of traditional vocational identities and their development into micro communities (characterised by their low level of interactivity with work), in which working individuals' career trajectories are becoming discontinuous and even blocked in some instances. The emergence, at the same time, of more or less a "new generation" of work related identities which are characterised by their high level on interactivity with the new forms of human resource management and work organisation, combined with an increased capacity to adapt and internalise change. In this context, the paper will be an investigation into the nature and direction of this change in relation to the development of the new paradigm of flexibility/mobility within the labour market. For this purpose, the paper will be divided into two basic sections. In the first section, the "post-fordist" development and implications of work related identity, flexibility and mobility concepts in a French context will be briefly reviewed. In the context of this background and in the light of FAME project overall objectives and evaluation criteria, the second section of the paper will be a presentation of the preliminary findings of the first stage of case studies conducted within three French sectors: metal industry, telecommunication and health care.

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INTRODUCTION

This paper is part of the work carried out within the framework of the European research project "FAME" (2000-2003) on "vocational identity, flexibility and mobility in the European labour market". Given that the basic aim of this seven-country study is an investigation into how both employers and employees perceive change in the dynamics of work-related identities and its socio-professional implications in relation to an increasing need for labour flexibility and mobility in the European labour market, the paper will be divided into two basic sections. As a background to the investigation, the first section is an overview of work related identity, flexibility and mobility concepts and the implications of their "post-Fordist" developments in the French context. With reference to FAME project overall objectives, the second section will be an examination of the key findings of the first stage of the investigation (focused primarily on employers' perspectives) within three different activity sectors: telecommunication, metal industry and health care.

I- BACKGROUND: RECENT DEVELOPMENTS

The nature and dynamics of identity formation and development has undergone an important structural change during the last three decades or so of the "post-Fordist" economy, based on globalisation, rapid technological change and the new paradigm of flexibility/mobility. This change has led to the transformation of the traditional work-related identities inherited from the Fordist era into two basic categories and implications (Sainsaulieu *at al*, 1977, 1985, 1995, 1996, 1998; Dubar *at al*, 1991, 1992, 1994, 1996): identities with low interactivity work and identities highly interactive with work and different forms of learning (Dif, 2000b, 2001a).

First, the identities with low level of interactivity with work and related learning have undergone, during the last 25 years or so, the following basic transformations:

- The *erosion* of the *fusion* type of occupational identities which are traditionally based on a high level of collective solidarity and relational interactivity. They are breaking down in a variety of micro communities in which working individuals' learning and career trajectories are increasingly subject to discontinuities and even blockage. They mainly concern all categories of employees accumulating a long working experience (generally over 15 years) within public and private organisations belonging basically to the traditional sectors which are undergoing important structural changes as is the case in steel and car industries, banking and transport sectors. As *categorical* or *blockage* identities (Dubar, 1992, 1994 and 1996), they are usually formed in cases where the participants' desired career progression or stability at least does not gain any favourable recognition through participation and negotiability. They constitute the socio-professional space of reference for these individuals who are forced in the end to identify themselves with a social representation usually at odds with the dominating mode of human resources management and development based on the the promotion of labour flexibility and mobility.
- The *transformation* of the late 60s traditional "*retreat*" model of socialisation at work, which was allowing workers to combine voluntarily work with other forms of daily life activities (such as family life, leisure, ...) in two ways. The first development is a simple extension of the same "*retreat*" type of identity to include a new category of employees who are more and more destabilised by the rapid technological change and the threat of exclusion (Sainsaulieu's "*administrative model*"). They are forced, in a way or another, to use the routine of the established rules and regulations as means of protection against change and potential risk of exclusion. The second development consists of the emergence of a completely new category of employees who work in direct link with clients and are

more active in counselling within the developing public sector (the model of *"civil servant professionals"*).

Secondly, the emergence of occupational identities characterised by their high level of interactivity with work and related learning, including their ability to adapt rapidly and internalise change. They are basically represented by the following models of work related social representation in communities of practice:

- The *"affinities-mobility"* type of identities, in which individuals (basically, high technicians, engineers and young graduates) are more able to adapt their professional strategies and learning/career projects to the new flexibility-based mode of human resource management, especially within innovative organisations with highly reduced pyramidal organisational structures and less promotional opportunities. These dynamic and highly mobile individuals are more inclined to use learning (especially, self-directed learning) to promote their functional flexibility and mobility through the development of well diversified portfolios of basic and specific competencies. This is why, within this model of occupational identities (*"mobility"* model), the individuals' relational network investment is selective and primarily oriented towards the achievement of their personal career projects than those of the community or the organisation. The chief is accepted only in the role of a collective project promoter. The leader is generally considered as hindrance to individual social promotion.
- The *"negotiation"* form of socialisation at work, which combines both high level of sociability and interactivity with work and related learning. It allows its members to be highly attached to the unity and autonomy of their community by being more open to democratic debate and use of negotiability to solve any situation of conflict and disagreement between them. This is why, the members of this kind of occupational identity have a relatively high aversion for hierarchical authority and prefer instead a leader who imposes himself or herself through work and mediation within the community. During the last two decades, these vocational identities, have developed their capacity to adapt and internalise two more or less related developments. The first development can be considered as a "re-professionalisation" of industrial work. It was linked to the emergence of a new generation of *"professionals"* in fields linked to the development of new technologies and modes of human resource management. Within this model (i.e., the *"model of professionals"*), individuals are highly attached to comradeship values based on a well done job, apprenticeship and solidarity between the members of the profession. As for the second development, it concerns the emergence of a new model of socialisation at work, (i.e. the *"entrepreneurial model"* or the *"corporate identity model"*). Within this model, vocational identities are made up of a new dynamic category of working individuals (managers, executives, sellers, ...) who possess and develop competencies which allow them to invest in change and be at the same time well integrated within the organisation. Their access to socio-professional promotion through CVT-induced promotional mobility is usually high through this form of work related identification.

All these developments and transformations of vocational identities coincided, during this same "post-fordist" era, with the phenomenon of an increased shift towards a new concept of work and related learning more based on the promotion of labour flexibility and mobility. In this context, the practice of *labour flexibility* has been observed to be increasingly founded on two alternative models for human resource management and development: the *externalisation* and *internalisation* models. They basically differ as to their implications for inclusion, competence development and work related identity formation (Charraud, Meliva, Personnaz and Simula, 1998; Simula, 19996, 1997; Dif, 1998, 2000a).

Within the externalisation model, the traditional employer-employee approach to human resource employment and management is increasingly abandoned in favour of a new approach more based on the *"user-provider"* relations. The *"provider"* can be another employer, a free-lance worker or an employee elsewhere. According to this model, the *"user"* (any producer of goods and services) can hire the required labour services at any moment for any period of time. It thus allows employers as *"users"* to avoid all kinds of costs ,constraints and risks inherent to a traditional work contract through the externalisation of:

- many financial commitments inherent to the traditional work contract between the employer and the employee (such as employer's contribution to social security, retirement and the unemployment funding, lay-out compensations, ...),
- and potential risks linked to trade union movements and internalised human resource management and development;

Concerning inclusion, skill and identity formation, it has the merit of allowing for:

- The promotion of learning transferability between users and providers of labour services;
- the development of more active and open work related identities;

But, as a promoter of the new concept of work, the externalisation model contributes to the exclusion of an increasing number of people who cannot or do not have the means to belong to "the providers' category", either because of lack of required qualifications or simply due to the constraint of their disadvantaged socio-economic background.

As for the model of internalisation, it continues to function according to the traditional concept of work, based on the usual contractual link: employer-employee. It is predominantly founded on an internalised "quantitative" labour flexibility accompanied by a relatively high rate of precarious employment and exclusion. This is mainly due to the development of two separate segments within the same internal labour market (Dif, 1998, 2000a):

- A large growing peripheral segment created through recruited workers on the basis of short and part-time basis with low salaries and limited access to training, promotions and trade union activity;
- A small and regressing "prime" segment made up of predominantly hard-core employees, who use the peripheral segment as a buffer to preserve, at least in the short run, their acquired socio-professional status within highly "introverted" occupational identities.

Being on the edge of transformation, the traditional model continues, by contrast, to favour permanently employed individuals with intermediate and highly specialised technical qualifications. But, for lack of enough internal and external functional flexibility, its contribution to a dynamic enrichment of learning and identity formation remains very limited.

Labour mobility is basically an induced concept. It is generally considered as one of the consequences of (Dubar and Podevin, 1990; Berton and Podevin, 1991; Podevin 1998; Dif, 2000b):

- The phenomena of flexibility-based new modes of organisation and human resource management, globalisation and the accelerated rhythm of technological change during the last three decades or so;
- Related change in the process of identity formation and development (on individual and collective levels);
- The instrumental use of VET in general and CVT in particular.

Two basic categories of labour mobility have been observed in the French context: *promotional and horizontal* (Podevin, 1998; Dubar and Podevin, 1990). The *promotional mobility* is, in fact, a combination of two forms of mobility: a *socio-professional* (or simply *social promotion*) in the case of individual's passage from one socio-professional category to a higher one within the formal nomenclature of professions and social categories (PCS), and a *vertical or hierarchical* mobility when there is a promotion to a higher employment position or qualification within the same socio-professional category. The latter is generally considered as prerequisite for access to a higher level of social promotion. There has been an overall drop in the *induced promotional mobility* over the last three decades. This decline seems to touch basically qualified and highly qualified workers. The observed effects of *CVT-induced promotional mobility* on employees' socio-professional promotion, were basically: increased qualifications, responsibilities and salaries. As for the *"horizontal mobility", it* concerns the worker's movement between jobs with more or less equivalent levels of qualifications and responsibilities, usually within the same socio-professional category. This movement can be within the same firm in the case of "*internal labour mobility*" and between firms in the case of "*external labour mobility*". The *induced horizontal mobility* has relatively increased during the same period due to the important contribution of the individual self-initiated and directed learning. It is a tendency, which coincides well with the concomitant

general move of firms towards the adoption of more "flat organisational structures". The *CVT-induced horizontal mobility* has been observed to lead to improved working conditions accompanied by stable salaries and qualifications (Dif, 2000b).

II- PRELIMINARY FINDINGS AND IMPLICATIONS IN THE CASE OF "FAME" PROJECT INVESTIGATION

In the context of these recent developments, this second section of the paper will be an examination of the preliminary key findings of the first stage of the investigation, undertaken within the framework of the European research project (2000-2003) on "Vocational Identity, Flexibility and Mobility in the European Labour Market (FAME)". The investigation as a whole is conducted on the basis of face-to-face semi-directive interviews with employers (first stage) and employees (second stage) within sectors representing different types of change in the workplace and related forms of identification and learning. These sectors are:

- The metal industry (e.g., car and electromechanical appliances for industry, in the French case) whose traditionally strong occupational identities have been challenged by the important tecnico-organisational changes during the last three decades.
- The health care as a representative of the traditional service sector, with its strong and regulated patterns of work related identities.
- Telecommunication sector as representative of the new economy, characterised by the emergence of new generation of occupational identities capable of internalising change and transferring it (directly and indirectly) to the rest of sectors.

The first stage of the study is an investigation into how employers (as small, medium and large organisations within these three sectors) perceive change in the dynamics of occupational identities and its socio-professional implications in relation to an increasing need for labour flexibility and mobility. Three categories of interrelated factors were taken into consideration within the semi-directive employer interviews and their qualitative evaluation: learning, organisational and individual factors:

Learning factors: How formal and non-formal learning are perceived by employers. How do they practically appreciate qualifications acquired through the initial formal learning system. How do they promote, assess and take into consideration further work related learning. To what extent the workplace constitutes a poor or rich learning environment. The affect of the latter on employees' work related identity formation and development in particular, and their socio-professional promotion in general.

Organisational factors: Dominant organisational structures of the institution (pyramidal, flat, ...), dominant work organisation (project/team-work organisation, externalisation, ...), forms of related labour flexibility/mobility and their effect on employees' identity formation, learning and socio-professional promotion.

Individual factors: Autonomy, communicability, responsibility/empowerment, time and functional flexibility, mobility (promotional, horizontal, ...), dominant forms of identification (team, product, service, culture of the enterprise, ...) and learning.

Taking into account simultaneously these interrelated factors, the preliminary results are presented as variations of a case study within each of the three sectors covered by the investigation. These cases are differentiated according to the nature of identification, the characteristics of the implied model of flexibility/mobility and their implications for change, learning and socio-professional promotion.

Case of telecommunication

According to the general objectives and evaluation criteria of the three-sector-study briefly outlined above, the results of the first stage of the investigation can be grouped into two basic variations: the case of relatively slow changing organisations and the case of those characterised by a faster pace of change.

The first variation is mainly observed within telecom firms which are still anchored (perhaps involuntarily) to their heavy heritage in terms of their complex organisational structure and mode of human resource management and development. The basic distinguishing features of their activity (e.g., France Telecom) are:

- Historical leadership as dominant and reliable operator in the field of traditional service provision;
- The quality and globalised character of services offered (such technical services linked to installation, maintenance; internet services for households and businesses, ...);
- The existence of R&D laboratories to improve and conserve their traditionally well established comparative advantage by keeping pace with new developments in related technologies and techniques.
- The use (at their "core-activity" level) of relatively high level of specific specialised competencies, especially among technicians and engineers.

The most important recent changes taking place within this type of organisations are basically linked to their organisational restructuring, such as:

- The mutualisation of services/activities, regrouping and reorganisation by processes, productivity and quality levels of services offered to customers
- Expansion through merger and acquisitions in complementary activities, especially in the services linked to internet, mobile telephony and multimedia.

Though decreasing, the dominant mode of organisation is still complex and basically hierarchical. However, the operational units are functioning as autonomous profit centres. Team-project work is increasingly used, especially in the case of launching new technologies, products and services. Within this mode of work organisation, most of the qualified employees (technical and commercial technicians and engineers) enjoy a relatively increasing level of autonomy in exercising their functions with rigour and functional flexibility (or both functional and temporal for executives). Spatial and functional mobility within and between sites and regions, communicability and competency in foreign languages (especially English) are becoming an important requirement, especially for commercial technicians and engineers. *A priori*, there is not any age or gender preference. Although technical positions are still dominantly masculine, there is an increasing feminisation of occupations within service provision units.

Concerning learning and its effect, most of the organisations in this category , especially larger and well established firms in the profession are involved in the following basic types of learning:

- In the state subsidised initial (alternating) vocational inclusion schemes such as apprenticeship and "vocational qualification contracts". It concerns basically candidates for high technician diplomas, whose training contracts can be transformed into work contracts (e.g., France Telecom).
- In CVT for its permanent employees through basically employer-directed training scheme (as a dominant regime) and employee-self directed training (e.g. leave for self-directed CVT). In addition, some employees benefit from training linked to product/service supply.

Their formal involvement in "VAP" (the accreditation of work-related learning) is underway. Although access to CVT may allow a certain number of employees to benefit from promotions, it is basically intended to improve the beneficiaries competencies, productivity and functional flexibility and mobility.

Given the increasing rate of external and internal functional/spatial mobility, this category of firms uses both types of recruitment: internal recruitment through staff transfers (sometimes with promotions) and dominantly external recruitment on the basis of unlimited duration work contracts in most cases. Usually recruited individuals need to have the required profile for the job. This includes the relevant level of formal (initial) qualifications and operational experience. But, it happens that a certain number of individuals without relevant work related experience, especially among the young ones, are recruited. In this case an initial job related learning is necessary. But on the whole, all recruited individuals (whether experienced or not), need to go through a preliminary training for integration within the culture of the organisation.

Resistance to change (reinforced by the influence of trade unions) is relatively high in the case of this category of organisations, especially within large companies or groups with a multinational character, expanding through absorption and merger. This is why, certain multinational groups, such as the French group "CS Communication & Systèmes", has to work continuously on reducing cultural identity clashes and the development of a unified corporate culture through the implementation of:

- Integration training and seminar programmes;

- A unified status and incentives for all employees.

Work-related identity transformation in this case, is half-way between the *"fusion"* and the *"negotiator"* models of interactivity and socialisation at work. From the employers' perspective, there is a relatively strong identification with the quality of the products and services in which the organisation is well established locally and or internationally (including the attachment to the firm's policy of employment preservation adopted by certain companies such as France Telecom).

As for the second variation within telecom sector, it concerns firms with relatively more flexible and/or simple organisational structures. It is generally represented by dynamic small-medium sized organisations operating as entities on their own or as autonomous subsidiaries within multinational groups. These organisations are mainly characterised by the existence of:

- More or less, flat organisational structures which comply with the general move toward a flexibility/mobility- based mode of human resource management and work organisation (such team-project work);
- Rich and changing learning environment, which allow individuals to develop their transversal competencies and job-polyvalence. However, this tendency has increased the fear of the technicians and engineers of losing their specific specialised competencies (and becoming simple "telecom generalists").
- Work and product related learning and training (with the aim of promoting functional internal flexibility/mobility) is usually secured at the level of the telecom constructor or product supplier. As the level of high technicians diploma (two-year-university degree) is, in general, the minimum requirement for any recruitment. Initial formal learning is increasingly appreciated for a career start in telecommunication.
- Increased use of the "provider-user" concept of work through the development of outsourcing/externalisation and consultancy work;
- Low tensions and resistance to change;
- Mixed model of "negotiation-mobility" model for identity formation and development, based on openness to change and strong identification with the quality of products/services provided for clients.

Case of metal industry

Always according to FAME investigation overall objectives and evaluation criteria outlined earlier in this paper, the main preliminary findings within the metal industry, can be grouped (from employers' perspective) into two basic cases as well: the case of Large firms and that of small-medium sized organisations.

First variation: the case of large organisations:

The organisational structure of these transnational large firms and their subsidiaries, is basically transversal. It is functioning through participative management where work is organised in autonomous teams or projects. Within GM Industrial plant of Strasbourg (employing 2,010 people in the production of automatic transmissions) for instance, the manufacturing operations are organised into separate units called business teams (BT). Each BT is in charge of manufacturing and sub-assembly. This organisation allows each BT to focus on its employees' safety, its production, quality and cost objectives. The BT functions like a single autonomous plant (i.e. a profit centre), actively supported by all departments as formalised through the working of transversal matrix teams (mixed teams). Therefore, it is up to each BT to decide which world-wide recognised quality parts the company has to get from its outside suppliers. An important part of the production activities are externalised. This externalisation concerns only non-core activities (i.e. peripheral activities) where the company does not have really a value added. This is why for some operations, the company concentrates only on finalising processes with high value added (as a "core activity").

Flexibility concerns all categories of the personnel, but it is relatively high on the production level, especially operators (qualified workers): organisational and network flexibility. Executives, engineers and technicians are more concerned by functional flexibility, which is usually reinforced by the existence of internal mobility (internal transfers). As for the

mobility, it is dominantly transversal and partially vertical. Moreover, these notions of flexibility and mobility are highly related to the development of a certain type of competence: For the qualified workers (i.e., the operators), they have to be able to integrate and work easily within the group with a strong attachment to the principle of providing high quality products and services. As for the high technicians, supervisors, engineers and other executives, they should be able to manage change and related stress (i.e., they need to develop the competency of managing change and stress in the workplace).
A priori, there is not any gender or age preference. But, due to the nature of the activity of these enterprises, especially at the production level, the employees are dominantly men. The situation for women recruitment has improved during the last decade on both engineering and operational levels.

Human resource development through career development schemes is an important part within the firm's whole strategy. It is based on the principle of allowing for equal access to training, learning and socio-professional promotion and consciousness. The organisation's needs for competence development are usually identified within the framework of a multi-period budget. Individual interviews are used as means of identifying the employees' particular needs for career development projects. In the light of these interviews, a career development plan is prepared and implemented for all the employees of the company. Consequently most of the organisations are dominantly involved in CVT. The latter concerns basically employer-directed CVT scheme (varying on average between 85% and 95% of CVT beneficiaries). As for employee-self directed CVT (i.e. leave for self-directed learning and leave of competency assessment), it concerns only about 5% to 15% of CVT beneficiaries.
They are also involved in apprenticeship and vocational inclusion schemes such as Vocational Qualification Contract regime (CQ).
Depending on the basic nature of training undertaken by the employees, there are three types of effects (from employers' perspective):

- The effect of the dominant employer-directed CVT is basically linked to its beneficiaries' career management and development, namely:
  - Improved qualifications (including obtaining corresponding degrees), leading ultimately to a certain number of promotions;
  - Higher levels of functional flexibility and mobility.
- Concerning the employee-self directed CVT, the effect is variable: the beneficiaries can rejoin their initial positions within the company or get totally different jobs (accompanied with promotions in a certain number of cases). But generally, it leads to external mobility, especially among young qualified employees who are more interested in different career projects.
- As for apprenticeship and alternating vocational inclusion training, it may allow the beneficiary to have access to an unlimited duration work contract.

Concerning the recruitment of the personnel, most of companies give a tacit priority to internal mobility through transfers and/or promotions. Then comes the recruitment for the required job profiles (including a minimum of transversal competencies requirements) basically on the basis of limited duration work contracts which are generally transformed to undetermined work duration contracts (depending on the obtained level of their vocational integration within the company). Given the difficulties of getting the right profile for job-vacancies, the company use the services of four temporary employment agencies for pre-recruitment contracts. Direct recruitment for unlimited duration concerns basically executives and high level engineers. Generally, most of recruited individuals need at least an adaptation training to the culture and working conditions within the enterprise.

Resistance to change within this category of organisations, can be found at two basic levels: individual and collective levels:

- At the individual level, the resistance to change is generally psycho-professional. It comes frequently from senior and less qualified workers who are still attached to the culture of merging or absorbed companies. It is also the result of stress and fear linked to rapid technological change in the field and its implications for changing work organisation and conditions (less hierarchy, more functional/time flexibility and work autonomy/responsibility, ...).
- At the collective level, resistance to change concerns the introduction of new important projects with important new technological content and restructuring effect. Any proposition concerning this kind of projects has to be considered and decided by the company's committee where representatives of the employees have to be present. The application of a 35-hour-week regime within all these types of companies, has introduced another type of collective resistance to change. It concerns basically the resistance by trade unions to any form of collective time flexibility. In some manufacturing factories, the working days on three-shift basis have been reduced to five. In most cases, trade unions are against the introduction of a fourth shift which extends the weekly working days (with more permanent employment) to 7 days.

With reference to the general patterns of work-related identities observed recently in French context (outlined in first section of this paper and elsewhere, Dif, 2000b and 2001a), occupational identities within these organisations are still undergoing their transformation within the framework of a mixed *"fusion"* - *"negotiator"* model of interactivity and socialisation at work. From the employers' perspective, there is an important improvement in the employees' attachment to the corporate identity, its culture and the quality of products and services provided to customers. In order to reinforce this type of identification, some firms use, in addition to different forms of access to training and learning, other incentives such as: individual performance and assiduity premiums, collective premiums (e.g., profit sharing), a 13th month of paid wages, free transport to work, subsidised meals, complementary retirements schemes and holiday premiums.

Second variation: the case of small and medium sized organisations:

Basically rooted in the tradition of regional and national capitalism, these family owned and run organisations generally possess, in relation to FAME project first stage investigation and evaluation criteria, the following basic characteristics:

- The existence of simple organisational structures more open to change. Work organisation is dominantly a " company-based project development", involving all the heads of the departments concerned by the project. There are no related profit centres. The implementation of the project on the level the department implies the existence of a certain hierarchical authority. The employees are required to be flexible and autonomous with rigour and responsibility within the limits of their functional work assignments. There is not any internal mobility requirement nor any other particular discriminatory preferences (gender or age, ...). Nevertheless, there are certain preferences for employees who are familiar with the basic foreign language for the company. Communicability is also appreciated.
- The dominance of employer-directed CVT with the aim of prompting the beneficiaries' adaptability to new technologies, their productivity improvement and access, in certain cases, to promotional mobility. Apprenticeship is usually linked to an ultimate firm recruitment, especially within small-sized family companies.

- A dominant preference for recruitment on the basis of permanent work contract. Short term employment is not frequently used. Once used, it is usually considered as a preliminary test period for employees to benefit from a long duration work contract. The recruited individuals have to be, in most cases, directly operational. But a complementary training is usually necessary, at least to introduce and adapt the new employees to the culture of the enterprise (especially for individuals recruited on the basis of unlimited duration work contract).
- Relatively high attachment to the company's product/service and its family-based professional identity. In addition to training, the company uses other types of individualised incentives to improve the employees' attitudes and performances at work, e.g. premiums based on their contributions to fulfilment of fixed objectives in relation to time schedules, productivity, clients' requirements, conformity standards.
- Limited resistance to change and involvement of trade unions.

Case of health care

In the light of the same evaluation criteria, the preliminary results of employers interviews within the health care sector, can be differentiated according to whether the sector is public or private.

Within the dominant public sector, the health care institutions (basically public hospitals) are mainly characterised by the dominance of:

- Heavy and complex organisational structures, where dominant mode of work organisation is a combination of "hierarchy" and team-working groups. These competency-based teams are working within well established hierarchy: units and departments usually run (around doctors/practitioners) by executives from the nursing staff. At the top of the hierarchy, all nursing activities are run by one or a group of senior executive nurses. Team-work on project-basis is limited to cases of important development projects (including research projects). The dominant form of flexibility and mobility is functional. It is implemented (when it is needed) through the use of a the existing multidisciplinary pole, called "the compensation or replacement pole" (of basically nurses and paramedical staff). The external mobility is relatively limited due to a shortage in nurses.
- High involvement (as university linked hospitals) in initial education (for doctors, nurses and other auxiliary medical staff), in alternating vocational education (not as a mode of vocational inclusion) and in CVT (employer-directed CVT and employee-self directed learning). The introduction and implementation of the regime of the accreditation of work-related learning is underway, but it will not include doctors and nurses.
- Highly institutionalised and regulated professional identities. In spite of their openness to innovation and use of modern technology, the basic medical professions are still not open to:
    - Doctors and even nurses with foreign qualifications without equivalence or further qualifications,
    - The accreditation of any type work related learning within the core profession.

The existence of these highly institutionalised introverted occupational identities supported by the involvement of a variety of strong trade unions, constitutes a major source of tension and resistance to change. This situation affects negatively the individual's relational interactivity and even his or her interactivity through work. For instance, an effective direct recruitment is not possible due to length and heaviness of formal procedures to be respected for any kind of recruitment. In addition, the employee's relational interactivity with the hierarchy is, in most cases, mediated by a representative of the trade union. Thus, the direct relational interactivity with the

hierarchy is highly limited at the individual level due to the use of unionisation and formally established rules and regulations specific to the profession as refuge and means of protection against change.

By contrast, the activity of the growing private sector, is on the whole characterised by:

- The dominance of simple organisational structure with more flexible and open mode of human resource management and work organisation. The dominant form of flexibility is basically temporal. As for mobility, it is mainly functional, spatial and external (especially within the nursing profession).
- Relatively limited financial means to invest in R&D and employees' CVT promotion and in attracting, at the same time, more qualified medical staff, especially nurses . This situation is accentuated by an imposed annual budget limit for accumulated costs of prescribed medicines (reimbursable by social security) to customers. This legal constraint (which, in fact, concerns all the health care sector) was introduced to keep balance of the annual financial accounts within the universal regime of social security coverage. For the practitioners within the medical profession, this constitutes an institutionalised accounting management constraint on the quality and development of health care services to be provided.
- A mixed (institutionally constrained) model of "negotiation-affinities" type for identity formation and development with a relatively strong identification with the quality of services provided to customers.

CONCLUSION

To conclude the paper, it is important to underline the following remarks concerning the contextual background and the investigation itself.

First, "occupational identities" rooted in the tradition of the "fordist economy" have indeed undergone important structural change during the last 25 years or so. Through some sort of "decomposition" and "re-composition" process, they developed into two basic categories of work related identities. The first category includes the "decomposing" traditional identities and their "re-composition" into a "cluster" of micro communities, generally characterised by their low level of voluntary interactivity with the emerging forms of work organisation and related concepts of learning, flexibility and mobility. As for the second category, it is represented by the emergence of more or less a "new generation" of vocational identities characterised by their relatively high level of interactivity with the new forms of work organisation combined with their ability to adapt and internalise change rapidly.
Moreover, these changes in work related identities have in fact coincided with emergence of a dominant and growing flexibility/mobility-based approach to human resource management and development. The practice of labour flexibility, within this approach, has been observed to be increasingly based on the use of two alternative models (i.e., the externalisation internalisation models) with different implications for work related identity formation, learning, inclusion and for the development of the concept of work. If the model of externalisation allows, on one hand its adherent (as users and providers) to develop multidimensional (individual and collective) identities more open to socio-economic and technological change, it has on the other hand, the disadvantage of excluding those people who cannot or do not have the means to have the status of a "provider". Despite its different structure and functioning, the internalisation model can be considered as complementary to other models (the externalisation and the traditional models), by taking in charge the employment of those individuals who are really excluded by both the growing externalisation model and the declining traditional model. But, due to its basic character as a model of

precariousness, the internalisation model has the disadvantage of contributing simultaneously, within the same labour market, to the development of:

- A regressing "prime" segment made up of privileged "core employees" with powerful and "introverted" occupational identities;
- A growing sphere of precariously employed individuals (with "poorer" vocational identities) used as a "buffer" to the prime segment.

Concerning mobility, there has been an overall decline in promotional mobility, especially among qualified and highly qualified workers. As for horizontal mobility (basically functional and spatial), it has relatively increased leading to improved working conditions with stable salaries and qualifications.

Secondly, the first stage of the present three-sector-case study confirms the basic elements and directions within the dynamics of work-related identity transformation characterising our "post-modern" era based on rapid technological change and globalising socio-economic environment. In this context, the telecommunication sector is taking the lead in the general move toward a mixed "negotiator-mobility" model of work-related identity formation and development, based on openness to change and strong identification with the quality of products and services provided to customers. In spite of their openness to innovation and use of modern technology, the health care activity, especially within the dominant public sector, is still characterised by the existence of highly regulated and "introverted" occupational identities, supported by the involvement of a variety of strong trade unions, which constitutes a major source of tension and resistance to change. Half way between the two, comes the metal sector where occupational identities are still undergoing, to a variable degree, an important structural change within the framework of a mixed "fusion-negotiator" model of interactivity and socialisation at work. From employers' perspective, there is an important improvement in the employers' attachment to the corporate identity, its culture and the quality of products and services provided. However, at this stage of this three-sector-study, it is important to consider these general indicators as a contextual basis for further exploration during the second stage of the investigation. For coherence purposes, it is crucial:

- To keep reference to the same investigation and evaluation criteria used during the first stage of these case studies,
- To optimise (for employee-interviews) the use of the same organisations used during the first stage of the investigation.

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Promoting social capital in a 'risk society': A new approach to emancipatory learning or a new moral authoritarianism?

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Introduction

The paper takes the form of an exchange of letters written by John Field and Kathryn Ecclestone. It came about following a series of discussions over the concept of social capital, and the ways in which it had been applied in vocational education and training. Social capital is attracting increasing attention in the context of vocational education and training, where it appeals to those anxious to promote an education that is more emancipatory and empowering than instrumental approaches based on human capital thinking. While we don't differ dramatically in our overall assessment, we certainly approach this topic in different ways, and a dialogue seemed a useful and appropriate way of pursuing the questions we had identified. Like any concept social capital inherently involves a number of normative assumptions, and these preoccupied our discussions; in particular, we discuss whether it has a connection with authoritarian as well as liberal-humanistic policy responses, and its relationship with theories of reflexive modernisation and risk society.

Each letter was written in turn, using the sequence outlined here. The letters weren't edited in the light of subsequent responses. First, John summarises the key principles of social capital and its importance for researchers in vocational education and training. Second, Kathryn highlights her perceptions of its progressive possibilities for educators and then broadens the concept to incorporate ideological cautions/tensions suggested by debates about a 'risk society'. Third, John illustrates positive uses of social capital for researchers interested in exploring informal learning and how different groups use social capital positively and negatively. Fourth, Kathryn applies the notion of social capital to the dynamics of formative assessment activities in a vocational education programme to highlight progressive and limited dimensions to students' experiences. Last, the authors together apply the notion of social capital to reflect on the process of engaging critically in academic discussion.

1. The Possibilities of Social Capital – John Field

The concept of social capital is increasingly influential in the social sciences. It has also started to attract attention among policy makers. The core idea of social capital theory is that social networks have value. Over time, interaction and connections give rise to shared norms, trust, and reciprocity which in turn foster cooperation to achieve common ends. In contrast with physical capital, financial capital and human capital, social capital is defined in terms of relationships and collectivities. This concept strikes me as an exciting one, which opens up the way in which we think about the acquisition and application of skills and knowledge.

Following on from the seminal work of James Coleman (1994), social capital has been widely held to have a strong relationship with achievement and participation in formal education. In his studies of ghetto schools in America, Coleman claimed that pupils in church-affiliated schools did relatively well because the messages of teachers were constantly reinforced by their immediate family, neighbours and community leaders. For Pierre Bourdieu on the other hand, social capital was one of several 'forms of capital' that together help explain the reproduction of socio-economic inequalities (Bourdieu 1986). For Robert Putnam, social capital is a cause of economic prosperity and effective government (Putnam 1993, 2000).

Social capital can be equally important in explaining patters of skill acquisition and knowledge exchange among adults. As a number of researchers have shown, networks with a high level of trust and reciprocity can favourably influence the transmission of competences, innovative ideas, lessons of experience and information between individuals and organisations. In particular, social capital can provide a mechanism for the exchange of tacit knowledge and embedded skills, as well as of scarce and valued information (Maskell et al 1998; Field and Spence 2000).

If there is anything in this analysis, then surely we – as researchers in the field of vocational education and training – need to take it seriously. But it also offers another prospect which I find equally tempting. Policy makers across much of the western world have been paying increasing attention to human capital in recent decades, so much so that the language of lifelong learning and the knowledge society are virtually policy platitudes. Yet the discourse is founded primarily upon straightforward human capital thinking, and the accompanying policy measures are far more conventionally focussed upon cranking up the supply side handle of training and vocational education. By contrast, policy makers have paid relatively little attention to the question of which particular social arrangements most favour the steady acquisition of skills and knowledge, and lead to the effective dissemination of successful innovation. It is precisely this question that is brought to the fore in the current debate over social capital.

For policy, the headline message is a simple one: more social capital means more lifelong learning. This is the case because networks that operate a basis of trust will encourage a general willingness to share ideas, skills, information and knowledge, as well as foster an openness and receptivity to new ideas, skills, information and knowledge that come from trusted sources. Social capital combats tendencies towards 'free-riding' among employers and employees alike. It reduces market failures associated with a competitive relationships: to use the language of game theory, it helps prisoners resolve their dilemma. It provides for collaborative approaches to risk and security, reducing uncertainty by providing a counterweight to the turbulence of market forces. At the most general level, then, more and better social capital is therefore a public good and a private good.

Of course, I accept that this is in some ways a misleading picture. It paints too positive a picture of social capital, and is based on massive over-generalisation. Social capital is highly differentiated in nature and value, and the resources that it provides are unequally distributed between individuals and groups. Extremes of socio-economic inequality are harmful to the health of social capital, because they reduce the possibility of creating 'bridging ties' that facilitate cooperation between different layers. The use of social capital to gain status and power at the expense of others will lead to suboptimal patterns of information and skills exchange (as when one group or workers within an organisation withholds information or denies access to skills to members of another group). Social capital can be used for bad causes as well as good (as when groups of workers pass around the information and skills needed for successful fraud).

So there are good grounds for caution when it comes to policy. But I hardly think that the main problem of modern risk societies is too much social capital! Rather, the debate over social capital represents a rich opportunity for engaging policy makers at all levels in discussion over the relationship between social arrangements and learning. It appeals to me because it represents a way of promoting approaches to education and training that are more emancipatory and empowering than instrumental approaches based on human capital thinking. For research purposes I see it as both a helpful heuristic device but also as a

concept that can be readily operationalised through empirical studies. And both in respect of policy and research, it provides a sharp instrument for opening up the closed world of informal learning.

2. Risking Social Capital? Kathryn Ecclestone

I agree with the progressive dimensions to social capital that you highlight and I agree that we need more of it. The concept fits well with radical liberal educators' concern to counter the self-interest and individualism integral to notions of human capital. Encouraging social capital also enables educationalists concerned with social justice (or even equal opportunities!) to explore how poor opportunities to develop social capital undermine its concomitant, namely cultural capital. Lack of access to positive networks, peer support and trust undermine people's chances of developing cultural capital. Such notions undoubtedly have important progressive dimensions, enabling researchers to explore, for example, potential for social and cultural capital embedded within qualifications and formal learning programmes as well as informal ones.

Social capital is therefore integral to enhancing positive social and cultural dimensions to motivation in learning programmes. In particular, it enables researchers to illuminate barriers and motives for participation in education and training within specific communities and workplaces. The concept of developing social capital also enables educators to promote the importance of outreach, community-based education and the idea of 'starting where learners are' as the basis for both course design and pedagogy. In turn, these notions resonate with a powerful tradition of adult education outside the hegemony and restrictions of institutionalised provision run by 'professionals'. One corollary of this is the need to allow adults who are reluctant or unconfident participants in formal programmes to learn 'with people like them' as a potential spring-board into other provision. For teachers, social capital is a welcome counter to the instrumentation of individualised learning programmes, since it allows teachers to focus on group dynamics and peer support. For those of us trained in group work and humanistic, non-didactic approaches to teaching and learning, social capital is pedagogically a good thing!

It is with the idea that social capital opens up possibilities for invidious forms of normative control that I want to engage here. Baron, Field and Schuller cite Richard Sennett's fear that communitananism is imposed in the name of social capital, but argue instead that *"oppressive communitananism or authoritarian government does not seem to us to be inherent in the notion, but to depend on the perspective and values of individual commentators..."* (2000, p30). For them, the choice is not between social capital as normative or an analytical tool. Following this argument, I believe that it is important to reiterate that social capital has important progressive aspects. In addition, I accept that any normative, and therefore

potentially judgmental, dimension to social capital, argued here, will have to be related to a specific ideological theme and then operationalised to see if arguments have an empirical basis.

My caution about social capital is not that it might 'wish away difference' or obscure structural sources of acrimonious difference within groups and communities (see Blaxter and Hughes, 2000 for discussion). Instead my concerns relate to Frank Furedi's thesis of 'risk aversion' (Furedi 1997; 2001) which I have discussed earlier in relation to a trend towards defining learners' needs from a moralising perspective that many adults are ' at risk' because they do not participate in education (see Ecclestone, 2000). In summary, my earlier application of Furedi's thesis to lifelong learning argues that liberal educators are increasingly infected by their own version of a broader 'culture of fear'. Furedi argues that interest in the sociology of risk promoted by Ulrich Beck and Anthony Giddens, and the 'reflexive modernisation' which Giddens sees as necessary to deal with growing economic, environmental and social risk, both arise from, and reinforce, political, social and individual preoccupation with risk. These trends lead to accompanying low expectations both about the future and our collective and individual abilities to face it. This fear depicts people as victims of events and their own failings isolated within fragmented communities. It then leads to a growing acceptance that state agencies and professionals are the only expert sources of help or control for a growing array of health, welfare and social problems from the most structurally–embedded and intractable to the most commonplace, mundane and personal. Fear of risk also leads to an increasing range of attributes and situations that politicians and agencies define as 'risky', and, in parallel, to new images of people as 'victims' of fate or individual inadequacy.

In the earlier paper, I argued that these judgements start by being genuinely well-meaning and a basis for leading people to independence, but that they end up as calls for compulsion once people resist voluntary ways of redeeming themselves. I began our debate for this paper by thinking that subtle forms of 'liberal authoritarianism' formed the main underlying problem in social capital but I now think it's more subtle than this.

First, instead of robust analyses of the socio-economic deprivation that creates a vicious circle with poor health, limited education etc, many education conferences are rife with depictions of education as the panacea for social economic and individual problems (see also Ainley, 1999). One effect is for non-participation in education to be perceived as a risk, both to individuals but, more insidiously, to peers: for example, you put your colleagues or community at risk by not updating your skills at work. Following this argument, the new publicity from the Learning and Skills Council (LSC, 2001) has a very thinly veiled line between concerns about social exclusion and poor productivity and stern judgements about the '7 million' learners who lack literacy and numeracy skills.*** Further evidence of strong moral judgements amongst

*** At different conferences and meetings I have heard this figure vary from 25% of the adult population to 15%.

personal mentors and administrators about 'excluded' and 'disaffected' people targeted by the ConneXions service is provided by Colley (2000). And a cultural deficit model continues amongst teachers, youth workers and mentors working with young people in economically-deprived areas (Cochrane, 2001). It is therefore a very short step from judgements, whether these are pitying, concerned or moralistic, to accepting a need to compel those who hold themselves and their communities back, into acquiring the 'necessary' skills. I acknowledged earlier that Baron et al (2000) are right to argue that social capital is not inherently normative. But if education is seen as a panacea, especially for individuals 'at risk' of a growing litany of social problems depicted as arising from poor achievement in formal education, then attempts to foster social capital are already set up to be normative.**

Second, once in formal or non-formal education, transgression from the increasingly regulated assessment and learning regimes that characterise much post – 16 provision also becomes a risk. In outcome-based assessment regimes for example, departing from, or challenging the assessment criteria becomes risky as teachers struggle to get students through the requirements (see below). Indeed, not gaining the qualification is a risk. New notions of risk therefore begin to permeate our educational mind-sets, while increasingly complex qualification, assessment and quality assurance regimes require new layers of experts to guide us through them.

It is this moralisation of risk that I want to relate to the claim that social capital is a progressive tool for enabling more people to participate in formal education.* This normative dimension can work in a number of ways. Some forms of social capital can exclude those who don't conform to both its formation and end goal. It can also be conservative and inward-looking (see, for example, Field and Spence 2000; Field and Schuller 1999). Deviance from top-down targets, such as getting a high rating in the Research Assessment Exercise, for example, seems to be depicted as undermining social capital, where colleagues with low ratings are depicted as both 'at risk' themselves and putting others 'at risk'. The issue of who defines the goals and indicators of success is important in deciding on the 'right' sort of social capital and those seen as 'unhelpful'.

More subtly, nurturing social capital within the safe confines of 'working with people like us' can lead to a particular form of risk aversion and low expectations of human agency. Outsiders to a community themselves become a threat while educators protect vulnerable, 'at risk' adults who do venture into

** On slides at education conferences, the litany of problems arising from non-participation, and particularly from low achievement and lack of basic skills, encompasses everything from alcohol abuse to unemployment, single parenthood, low aspirations from parents, lack of inside toilets in houses and poor health.

* I am deliberately using terms like 'formal' or 'informal' education as opposed to the bland catch-all 'learning' which now permeates all educational debates. Without any robust or explicit definition of ''learning' (see Coffield, 1997), the idea of 'non-learners' or 'non-participation' takes on a judgmental tone of its own.

education from the risk of spreading their wings. Protection turns initial confidence-building into ongoing confinement and security (examples from community education). Safety, security and a commitment on the part of professionals to helping people to avert risk are therefore likely to result ultimately in very conservative forms of social capital. And, ironically for educators, concerns about risk can work to prevent adults developing new, different forms of cultural capital that might transform individual and collective lives.

3. Over-Dramatising Risk – John Field

Your main objection to the concept of social capital appears to be concerned with policy issues rather than its role as a heuristic tool for research. The suggestion is that social capital is consistent with other measures that seek to place learners inside a limited – and limiting - socio-cultural 'comfort zone'. The first aspect of this is that social capital is associated with the moralisation of risk. The second is that social capital represents both a new axis of, and a new principle of legitimation for, social exclusion. These arguments are placed in the context of Frank Furedi's widely discussed hypothesis concerning the creation of a culture of fear, in which risk avoidance strategies become widespread.

First, let me say that I am not entirely persuaded by Furedi's line of thinking. Empirically, it is possible to observe plenty of everyday contexts where, far from avoiding risk, individuals actively seek to place themelves in its line. If our society were uniformly risk-averse, there would be no demand for white knuckle rides, fast cars, mountaineering, white water rafting or adulterous sex. As the singer Mary Coughlan has it, "A thrill's a thrill". In many economic spheres, a value is placed on being a "risktaker". Nor is it clear how the alleged culture of fear first arose, nor how it has taken hold so successfully. Finally, some risks really are not nice. Avoiding them is neither irrational nor inherently negative.

Nevertheless, Furedi has highlighted (and over-dramatised) one half of an important twin process: in response to what Beck and Giddens call 'manufactured risk' and the parallel unpredictability of social roles and economic behaviour, actors may adopt an active embrace of risk and a series of strategies designed to manage risk. Those who turn to counselling or therapy – to take one of Furedi's best known examples – may be doing so in order to cope with the conseqences of their own choices, as a way of developing a more secure identity as an agent in insecure circumstances, or in order to adapt tactically to an inherently risky situation. Thus you may decide to take workplace counselling in order to learn to live with the risks of conflict among your workmates, rather than opt for the new risks of trying to remove what you believe to be the causes of conflict. And of course, individuals and groups can draw on their networks and contacts to provide resources that help them cooperate to pursue their strategies.

Of course, it is impossible to separate social capital from moral questions. If Coleman and Putnam are right, then the shared norms of any network constitute an important component of its social capital. Bourdieu, Coleman and Putnam have all expressed strong normative opinions on the subject, with the latter two being notably optimistic. It is therefore highly likely that a normative element will arise when the concept is operationalised, particularly perhaps when it is applied for purposes of policy or pedagogy. But there are two reasons at least why this argument should be treated with care. First, we should not treat actors as passive victims; adults who do not participate in education and training may be engaging in self-exclusion, for example. Equally those whose networks and values tie them tightly into a community that has no access to new jobs or new skills and knowledge are indeed likely to experience fairly direct consequences. A discourse which ridicules 'blaming-the-victim' is a poor substitute for rigorous analysis of the background to social exclusion, which may include self-exclusionary processes in respect of VET as in other fields of practice.

In determining young people's trajectories in the school-to-work transition, social capital – in the form of networks and trust – have been found to play an enormously significant role, not just for the privileged, but are at least as important among young people who enter manual occupations. This insight was developed particularly by Mark Granovetter, who drew attention to the ways in which networks reduced the costs of job search for young people and employers alike. He stressed particularly the role of what he called 'weak ties' – that is, contacts that crossed the boundaries of kinship and neighbourhood, rather than the 'close' – or 'primordial' – ties that Coleman emphasised (Granovetter 1985). Recent work in New Zealand has examined the consequences of the new economy for this route into employment, and suggests that there has been a shift of emphasis away from parental social capital (which is too closely rooted in Fordist work conditions to help young people) to young people's own networks, which may of course be extremely limited in scale and scope (Sturdee 2001).

Further relevant illustrations come from a recent study of lifelong learning in Scotland and Northern Ireland (Field and Spence 2000; Field and Schuller 1999). In summary, this study found that on several indicators, levels of social capital were comparatively high in Scotland and Northern Ireland. Many of the elements of strong social capital appeared to favour very high levels of informal acquisition of skills and knowledge and promote the transfer of innovation. Much informal learning relied on high levels of trust and regular multiplex contacts between both employees and owner-managers. They were particularly effective in transferring embedded skills and tacit knowledge. However, they did so in highly restrictive ways that also limited the scope and scale of the resulting benefits.

Only those skills and knowledge could be acquired that were already found within existing networks, and innovation could only be adopted if it did not unsettle or challenge existing stable relationships and norms. There was little contact with new methods that were only available outside the existing networks. Patterns

of labour recruitment and employee development were often highly exclusionary (and the connection with risk avoidance in Northern Ireland was predictably high). In the case of Northern Ireland, where the labour market shows clear tendencies towards discreet segregation, high levels of social capital were associated with a range of employment practices that were designed to exclude potentially threatening outsiders, while promoting high levels of exchange of relevant information and skills among members of one's own community. Friendship-network structures are able to promote anti-competitive strategies and enforce rules of invisible cartels, such as price-fixing, which have sub-optimal consequences for efficiency and innovation. More pertinently, there was evidence in our study of Northern Ireland and Scotland that networks functioned to damp down aspirations and keep the over-ambitious in their rightful place.

Such research is helpful in explaining both the strength of social capital as a resource (in this case, in regard to informally acquired skills and knowledge) and some of its limits. Others have examined a range of related areas including the role of networks in diffusing innovation within the Danish furniture industry (Maskell 2000) and the function of friendships between competitors in the transmission of knowledge within the Australian hotel industry (Ingram and Roberts 2000). The concept therefore seems to have played a positive role in stimulating new research questions, and suggesting possible explanations for patterns of behaviour.

The debate has not gone so far in respect of policy, and here I do think some caution is needed. However, it is wrong to assume that an emphasis on social capital therefore implies that policymakers should erect barriers around the 'comfort zone'. Rather, any policy emphasis on social capital should rather draw attention to ways of enabling excluded individuals and communities to develop vertical linkages that 'scale up' the resources at their disposal (Woolcock 2001, 13). Nor is compulsion to train a necessary ingredient of any such policies. On the contrary: an emphasis on social capital draws attention to resources already in place. It is an alternative to the more conventional 'deficit model' of the strategies required to develop effective and appropriate vocational education and training.

Finally, most policy thinking on vocational education and training, and much research, is excessively concerned with formal instruction and certificates. This is in itself a form of risk avoidance. Formal instruction and certificates are relatively easy to measure, they are frequently provided or regulated by the state, and they can also be costed with some precision. This is one reason why many economists writing about human capital tend to produce rates of return that are mainly or even solely concerned with the formal education and training system. It is conceivable of course that policy makers might decide to approach social capital in the same mechanistic way.

4. Social capital in a Comfort Zone – Kathryn Ecclestone

So far, we don't disagree that social capital is a positive heuristic device, that it offers an important lens on progressive and conservative tendencies in the types of social capital on offer and on the social capital fostered in formal and informal learning. Highlighting these dimensions empirically can, potentially, help to empower social groups to break cycles of economic and social deprivation by maximising and improving forms of social capital. Importantly, you remind us of our joint commitment to trying to analyse rigorously the background to social exclusion and you point out that this may include self-exclusion in education and training. This commitment, our agreements and our disagreements will suggest policy and research implications and we should draw these out later.

But before we do that, I think you represent my analysis wrongly in two key respects. First, you suggest that I am in danger of substituting a ridiculing of 'blaming the victim' tendencies in current debates about lifelong learning for robust analysis of deprivation. Instead, my criticism of these traits is founded on a fear that such analysis is absent in mainstream policy debates. This is probably not surprising but it is worrying when similar lack of analysis leads to professional educators espousing their own subtle forms of 'blame the victim'. I argued that a thesis of risk aversion offers a way of showing how subtle these new forms are.

Second, because you can find no causal explanation for evidence cited by Furedi and extended by me for risk aversion, you don't address the problem of professional risk aversion and the subtle way that this can operate inside formal learning programmes. (I agree completely that we don't know enough about *informal* learning). Instead, you argue that Furedi highlights individual risk aversion and rejects positive risk. I think he sees the opposite case where people continue to take all sorts of creative and positive risks, alongside damaging ones both to themselves and others. Of course, some risks are inherently dangerous or irresponsible both to oneself or to others (or socially constructed as such!) and it's easy to generate an obvious list. But others are necessary to growing up, being a parent, being a responsible citizen etc. The problem is not individual risk-taking but that more and more everyday behaviours, including 'good' risks, are deemed by professionals and government as bad ones and, more insidiously, as irresponsible and in need of regulation. Many of the risks you cite are now accompanied by health warnings: if you get your kicks from going up and down escalators, helpful notices on New York ones will warn you of risks. If you cycle the west coast of America without a crash helmet for the thrill of the wind in your hair, you will get a heap of moralising nagging from otherwise quite liberal people! These are not merely facetious examples but signs that behaviours are increasingly characterised as risky. Even capitalist risk taking is surrounded by a growing industry of risk calculation and, often, avoidance (see Elliott and Atkinson, 1998). Or, behaviours seen as risky (promiscuity, for example) are depicted as an individual trait which can be cured, such as 'sex addiction'. New risks, new victims. I don't think that Furedi suggests anywhere that all this emanates from professional vested interests, although this is perhaps one effect. I think he sees the trend, more marked in the USA than here, as a 'zeitgeist'. Is it possible to cite evidence and then seek structural explanations for ideological shifts?

Your point about risk aversion in formal qualifications is pertinent. In a recent two year study, I explored the impact of the outcome-based assessment regime in Advanced General National Vocational Qualification (GNVQs) on further education students' autonomy and motivation (Ecclestone 2002). If I apply notions of 'risk aversion' to this study, both progressive and negative dimensions to social capital emerge. (It is important to acknowledge that the study did not seek to operationalise the concept of social capital amongst teachers and students). I explored concepts of 'autonomy' and ' motivation', characterising different types of each attribute and showing how they fluctuated during a two-year learning programme (see Ecclestone 2000 for detailed discussion of the typology). The study showed that deep forms of motivation and critical autonomy require strategic attention from teachers through pedagogy and particularly formative assessment. Attention also needs to be paid to the types of social capital outside formal education that students can draw upon (Bates and Allatt 1998) as well as to the social capital fostered during a course. New forms of social capital are especially important. Yet motivation and autonomy are potentially risky, partly because they might involve a new learning identity from one developed from previous experience (see also Brookfield, 2000) and thereby different from the learning identity of peers, family or other networks. This new identity might mean concerted effort and engagement with study and learning, rejection of peer norms of low levels of work, new social capital and new ways of thinking. It also requires good supportive networks that contribute to deep forms of motivation and autonomy. Risk-taking and its effects on adults' learning identity is, therefore, complex and contains elements of both compulsion and voluntarism (Field, 2001).

The first model of GNVQs aimed for real-life vocational projects to enable students to develop new networks and contacts within local communities while an ethos of active learning would encourage new social and working relationships for these projects within the GNVQ group itself. And, as Bates and Allatt (1999) argue, opportunities to develop cultural capital are affected by opportunities to draw on social networks outside a course such as family and employers. The 18 students in my study developed their social capital largely with 'people like them'. In addition to limited external contacts for many students, institutional factors affected possibilities for going outside these boundaries. Lack of resources for more than 15 hours formal contact with teachers working with the whole group, a feature common in full time FE college courses, students developed their own *ad hoc* networks based almost solely on friendship cliques. For less confident students who saw GNVQs as a 'second chance' to gain a 'good qualification', these informal and secure networks were crucial to their motivation and to their perception of being independent. Importantly, peer support, combined with encouragement for students to work to the assessment specifications without intervention from teachers, shaped a 'comfort zone' of acceptable engagement and norms of working. Ultimately, this constrained their own and teachers' expectations of autonomy to merely having command of the official requirements. Their interpretations of these requirements also encouraged students to resist work that was 'too difficult', pressuring teachers to work

within the boundaries of assessment criteria. Apart from the six highest achieving students, students also resisted working with peers outside their friendship cliques.

Teachers' concern for students' prospects was mediated by regulation from the Qualification and Curriculum Authority and awarding bodies to ensure that they also compiled closely with the assessment regime. Teachers therefore worked within a comfort zone of acceptable engagement, coaching students through the requirements and allowing friendship working patterns to remain the same over two years. Departing from these requirements had strong images of risk for teachers, while conditions of service in colleges and continuous upheaval and restructuring made teachers' own work increasingly risky. 'Playing safe', 'getting through', 'tracking and checking' students' work narrowly within confines of the assessment criteria were rational responses to such pressures: networks, trust and norms were similarly safe and audit-based. Accepting the risks of failure through not meeting the requirements reduced any possibilities for social capital to safe, comfortable networks that, in turn, constrained expectations of engagement. In this context, teachers or students who wanted to take risks such as engaging critically with the content of modules became 'outsiders' to the GNVQ community. Such pressures led one of the nine teachers to give up his long-held aspirations as a sociology teacher to encourage students to think critically and, instead, covered only the content relevant to the 'Pass' criteria. And a recent follow-up interview with one of the six high achieving students, now in his second year of university, revealed that his desire to engage critically with the content of some of the modules in his Business degree produces a similar 'outsider' effect. This makes him turn in on his immediate group of like-minded peers for support.

In such a climate, trust between students and between teachers and students coalesces around conforming to norms of engagement. In GNVQs, these norms were influenced strongly by the prescriptive nature of the assessment regime where giving students 'ownership' of the criteria gave them a powerful basis for shaping norms. By the end of two years, notions of 'good' GNVQ teachers and 'good' students held by the sample had changed to those who got the student through and autonomous students were those who could get themselves through!

All of this implies that our exploration of social capital, networks and trust within learning programmes should acknowledge this ideological dimension – even if we do not yet have a convincing explanation for evidence that risk aversion does seem, for me anyway, to exist! If we don't, then I think social capital will too easily be infected with conservative risk and low expectations, followed by mechanistic measures of its impact. Lastly, if risk aversion infects the forms of social capital that teachers promote overtly and unwittingly, and the forms that learners are prepared to develop, then 'starting where the learners are' takes on an extremely reactionary role. Ultimately, risk aversion, comfort and safety will start from where they are... and then leave them there.

Conclusion: Risk and Social Capital in Academic Communication

Perhaps it is worth reflecting on forms of social capital that 'people like us' can, potentially, develop through an exchange like this one. This is not simply self-indulgence on our part. After all, feminists have famously criticised the role of old boy networks and patriarchal informal cultures in creating the 'glass ceiling' phenomenon (Currie and Thiele 2001, 92), while Bourdieu similarly noted the role of contacts and trust in reproducing the heirarchies of power and esteem among the tribes of "homo academicus" (Bourdieu 1998). Throughout this dialogue, we found ourselves exchanging emails about the nature of the research community in post-compulsory education and training, and wondering out loud why focussed, critical exchanges of this kind were relatively rare within that community.

Critical autonomy and deep forms of intrinsic motivation are both expected in, and integral to, our roles as academic researchers. Yet, they seem, often, to take an individualistic, introspective form, at least in our small world of academic VET research. And, while social capital develops our autonomy by extending networks with students and peers, there seem to be very few public risks in offering new arguments or even engaging with old ones! It seems that if people criticise arguments from outside cosy networks of like-minded academics, and outside the private and insular formats of written articles, the vitriolic exchanges that often take place suggest a low level of trust. The resulting tendency to seek avoidance of risk means that, too commonly, ideas are simply not directly debated. Hence the familiar pattern in VET research of one-off studies that neither engage directly with the existing literature, nor seek to challenge and test the findings of others.

There are of course general occupational reasons - such as intense workloads, competing priorities and limited proper time to talk things through – which help explain this pattern. Typically, also, researchers in this field are fragmented by disciplinary and organisational boundaries; within universities, VET research may be conducted by small groups or even individuals, scattered across several departments, and frequently isolated from one another. The general shift towards a more competitive ethos within academic life, and the

managerial domination of higher education by the 'long generation' of largely male academics appointed during the years of expansion (now thirty years ago or more), may also have fostered an insider culture and inhibited constructive debate.

In this exchange, we have cooperated to explore common concerns and to create a potentially new network if others engage with our ideas. We both share, in general, the norms of a rationalist approach to academic engagement, which sees truth as more than a neo-Foucauldian game, and appeals instead to the analytical interplay of evidence and logic. Trust is needed both for conforming to norms and for maintaining credibility in our network of two, and the networks that cross into it. But trust is needed for other dimensions to any critical autonomy we might develop. For example, the risk involved in debating controversial ideas in draft and in public is affected, for both of us, by feelings of status and academic confidence. Nevertheless, as a relatively junior academic, Kathryn is taking the risk in partnership with (or, as some might perceive it, under the sponsorship or patronage of) someone more senior and more confident in public arenas of academic debate. As the more established academic, John in turn has accepted that there are risks of exposure in testing out a relatively unfamiliar format in front of an unknown audience. This requires trust, on both sides, that criticism is genuinely meant to explore and improve the ideas rather than the personal status of the person dealing it out and that debate in public will be similarly motivated.

This process has also led us to reflect on the prospects for future research into the relationships between VET and social capital. The role of social capital as a mechanism for transmitting information and skills is now widely acknowledged, and this has a number of consequences for both policy and practice. This in turn is part of a wider acceptance that some understanding of particular social arrangements and milieus is vital to a holistic analysis of the generation and transmission of skills and knowledge. While it is clear to both of us that explicit policy formation in this area is still in its infancy, Robert Putnam and many others (including the OECD and World Bank) are now pressing the policy community to examine the benefits of investing in social capital. We therefore expect that this will become a fruitful area of investigation for the future.

A brief agenda for further research arising from the present dialogue would include:

- the impact of informal learning through contacts and networks upon economic performance;
- the impact of informal learning through contacts and networks upon social inequalities and exclusion;
- social capital and informal learning within workplace contexts (Macneil 2001);
- the extent to which educational and training activities themselves generate new types of social capital;
- the question of whether particular types of social capital may favour or hinder risk-taking, innovation and enterprise;
- empirical evidence concerning the relationship between social capital and a more or less benevolent authoritarianism in respect of policy;

- the relationship between theories of social capital and attempts to operationalise situated cognition for purposes of pedagogic research (such as Lave and Wenger 1991); and
- the extent to which theories of social capital are compatible with other attempts to model the social space within which knowledge and skills are transmitted, such as recent investigations of social milieus and continuing education in Germany (Barz 2000).

We also believe that the VET research community could usefully consider the ways in which its own social capital might be built in the future. Our own clear preference would be for an open approach to networking that tolerates diversity, encourages newcomers and has plenty of capacity for bridging ties across different domains of VET, as well as into the worlds of policy and practice. We see these as vital steps in the creation of a high trust culture that will foster sustained debate and collaboration, encourage risk and innovation, and help raise the collective status of what remains a somewhat marginal and fragmented field.

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The value of a three-year upper secondary vocational education in the labour market

by

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Abstract

Educational policy in Sweden has been to raise the minimum level of educati onal attainment of young people and this is still the current policy. A recent reform of upper secondary school, in which the two-year vocational programmes have become three -year programmes, was implemented all over the country in 1995/96. Before this ref orm was decided upon an extensive pilot scheme with three-year vocational programmes started in the final years of the 1980s. In the beginning of the 1990s young people with two- as well as with three-year vocational education entered the labour market at the same time. Thus, the value of the two- and three-year programmes in the labour market can be compared for the same period. The aim of the study is to investigate the market value of a number of three-year vocational programmes in comparison with corresponding two -year programmes. A register from Statistics Sweden with individual data on education and labour market position for the population of working age has been used to provide data.

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1 Introduction

Educational policy in Sweden, since the end of the second world war, has been to raise the minimum level of educational attainment of young people and this is still the current policy. In the 1960s a nine-year comprehensive education was implemented. In 1971 a reformed upper secondary school was introduced, which also included vocational education. The vocational programmes were two-year programmes with a mix of general education and vocational training. The academic programmes were mainly three-year programmes. A recent reform of upper secondary school has been implemented all over the country in 1995/96. In this reform the vocational programmes have become three-year programmes and with more general education.

Before this reform was implemented all over the country a pilot scheme with three-year vocational programmes was conducted in the school years 1988/89-90/91. In the first school year of the pilot scheme about 6 000 students were planned to participate. The year after 10 000 students were planned to participate and the third, i.e. the last year 11 200 students (SOU 1992:25) were planned to participate. This scheme concerned about 11 percent of the students in the vocational programmes the first year, 17 percent the second and 21 percent the third year. This means that in the beginning of the 1990s young people with two- and three-year vocational education respectivily left school and entered the labour market at the same time. It is therefore possible to follow young adults both with a two-year and a three-year vocational education in the labour market at the same time.

The paper is structured as follows. The aims of the study are in Section 2. Section 3 gives a brief description of the implementation of the reform in upper secondary school. Section 4 presents the pilot scheme. Section 5 gives the details of the data and discusses the method. The results are presented in Section 6. In Section 7 we have the conclusions.

2 Aims

The aim of the study is to investigate the labour market position of young adults with a three-year vocational education and training from the pilot scheme. Their position on the labour market will be compared with young adults with a two -year vocational education and training from the regular vocational programmes in upper secondary school. Have a third year in the upper secondary school made any differences after a few years on the labour market? Have the young adults with a three-year vocational education and training been employed to a greater extent than those with a shorter vocational education and training? Did they get a higher wage? Have a third year meant the same for men and women?

A register from Statistics Sweden with individual data about their education and labour market position of the population of worki ng age (16-64) will be used in the study.

3 The implementation of the reform in upper secondary school

Before we begin to describe the pilot scheme it is of value to give a short introduction to the implementation of the reform. We will present the gradual implementation of the re-form by studying the number of students leaving upper secondary school from the two - and the three-year vocational programmes.

The new reform was implemented gradually in the upper secondary school from the school year 1992/93 and was completely implemented in the school year 1995/96 (Prop. 1990/91:85). The transition from two- year vocational programmes to three -year vocational preparatory programmes is shown in *Table 1* .

Table 1. The transition from two-year vocational programmes to three-year vocational programmes. Number of students leaving upper secondary school

Programmes	1990	1991	1992	1993	1994	1995	1996	1997
2-year vocational	39 539	36 202	35 273	32 949	23 088	3 537	136	.
3-year vocational, pilot scheme	421	4 389	7 435	8 605	10 566	5 646	289	31
3-year vocational	.	.	.	.	.	13 404	40 756	37 122

Source: Statistics Sweden (1999b).

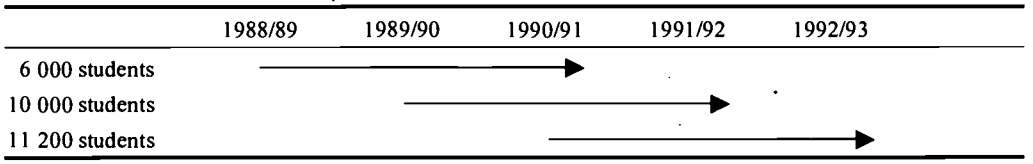
The first students with a three-year vocational programme left upper secondary school already in 1990. They were only 421. In the next year the 4 389 students with a three-year vocational education left upper secondary school. They had participated in the pilot scheme. The last year the students with a two-year vocational education was in majority among the school leavers with a vocational of students was in 1994. In 1997 there were only students with a three-year vocational programme who left upper secondary school.

4 The pilot scheme

4.1 An overview

The pilot scheme began in the school year 1988/89 with a plan of receiving about 6 000 students. In the school year 1989/90 it was planned to receive about 10 000 students and in 1991 to receive 11 200 in the pilot scheme. The structure of the pilot scheme is illustrated in *Table 2*.

Table 2. The structure of the pilot scheme



Most of the students in the pilot scheme left upper secondary school after three years. Thus, most of the 6 000 students left school in 1991 and most of the students in the last cohort left in 1993.

Before the reform a student could chose among 17 vocational programmes in upper secondary school.[1] Most of these were reformed into a three-year vocational programme in the pilot scheme. However, there were some exceptions. Two of the two-year vocational programmes were not reformed. These two programmes were production and maintenance engineering, and consumer studies. There were also a few new three -year vocational programmes which did not have a comparable vocational programme in the two-year system. *Table 3* shows the number of students that was expected and how many that was received in the different vocational programmes.

Table 3. Number of expected and admitted students by educational programme and year in the pilot scheme

Programme	1988/89 Number of expected students	1988 Number of admitted students	1989/90 Number of expected students	1989 Number of admitted students	1990/91 Number of expected students	1990 Number of admitted students
Building and construction	296	287	408	403	432	429
Electrical & telecom-munication engineering	528	535	656	637	776	770
Motor and transport engineering	752	725	992	961	1 056	1 035
Commercial	210	207	660	640	990	953
Industrial technology	1 536	1 380	1 856	1 638	1 976	1 739
Caring services	2 106	1 804	2 946	2 434	3 040	2 537
Textile & clothing manufacturing	136	122	208	163	224	186
Nursing	256	226	390	389	420	420
Heating, ventilation & plumbing	64	65	72	73	104	105
Natural resource use	352	328	640	588	720	717
Craft	-	-	32	31	64	61
Restaurant	-	-	336	335	416	414
Food manufacturing	-	-	224	205	256	229
Painting & decorating	-	-	56	54	88	86
Sheet-metal roofing & ventilation	-	-	56	51	56	52
Woodwork	-	-	144	130	168	152
Productive engineering	-	-	176	147	208	161
Graphic	-	-	-	-	112	112
Total	**6 236**	**5 679**	**9 852**	**8 879**	**11 106**	**10 158**

Source: SOU 1990:75 & Statistics Sweden, Statistical yearbook, various issues.

The number of received students was about 91 percent of the number that was planned for. In all the three years a new age cohort was received in the pilot scheme.

[1] See Appendix A.

Most of the students (84 percent) who participated in the pilot scheme and who were admitted in the school year 1988/89 were 16 years old or would become 16 years old du r-ing the year (SOU 1989:90). The evaluations (SOU 1989:90; SOU 1990:75; SOU 1992:25) show that the distribution of gender in the three-year vocational programmes follows the traditional gender segregated pattern from the two-year vocational programmes, i.e. in most of the programmes either men or women dominate.

The work related training in the three-year programmes took place every year in the pi-lot scheme. 10 percent of the time in the first and second grade was spent at a work place while 60 percent of the time was spent at a work place in the third grade (SOU 1990:75). Expressed in weeks it was 4 and 22 weeks, respectively. [2]

4.2 The implementation of the pilot scheme[3]

The pilot scheme with the three-year vocational programmes in upper secondary school had several aims. One was extended workplace training in order to increase the quality of the vocational training. At the workplace the equipment is usually more up to date than in school. Another aim was to give the students more on general education to prepare them for higher education. Hence, the implementation of the pilot scheme involved many agen-cies.

In this section we will outline which agencies were involved and what they meant for the process of decisions. First of all it was decided by the Ministry of Education to delegate the responsibility of the implementation to the National board of education[4]. They selected which municipality was to participate. They also decided the how many classes in each municipality should participate. The upper secondary school were financed by the central

[2] The system that is in use in the upper secondary school today the work related training included in the voca-tional programmes has decreased (Prop. 1990/91:85).
[3] The information in this section is taken from SOU 1989:106.
[4] In 1991 it was replaced by the National Agency for Education.

government and not by the local governments at that time, so the schools usually followed central decisions.

The local school boards in the municipalities applied to participate. Usually, the initiative came from the local upper secondary school that wanted to participate. First the local school negotiated with the local firms about their possibilities to receive students and give them extended workplace training. This was often the most difficult part of the new three - year programme.

The application was sent to the county school board. They examined the applications and made recommendation to the National board of education which school should participate. The final decision was made by the National board of education. They had the following criteria and assessments to select the participating municipalities in the pilot scheme.

Proportionality was one of the criteria. It meant that the number of students on each programme in the pilot scheme should be in proportion to the size of the corresponding two-year programme. However, in some cases there were some exceptions from this criterion. Small programmes in the regular system were over-represented. Also the labour market put some limits to what was possible to obtain. Another criterion was that every class in the pilot scheme should substitute a class in the corresponding two-year programme. Even from this criterion a few exceptions was made. In some municipalities it was not po s-sible to change all the regular classes into three-year classes within the same programme, as the number of expected students in the pilot scheme were limited. For example, if one municipality had six classes with a two-year metal work programme then all these were not replaced by a three-year industrial technology programme. This also made it possible for a few students to make a choice to attend a two -year or a three-year programme in the same school.

The third criterion was the local possibility to arrange the extended workplace training. The municipalities' resources to arrange this, was exa mined by the trade association in

question. The National board of education made no investigation of their own but relied on the trade associations' recommendations.

The National board of education received applications from local school boards for 10 100 students. About 5 000 students could participate in the pilot scheme. Thus, all local school boards were not permitted to participate and the dimension of participation in the selected municipalities was also restricted.

In the second year of the pilot scheme it was decided that schools already participating in the pilot scheme should continue their participation by receiving a new age cohort in grade 1 of their three-year programmes. It was also decided that the number of students in the pilot scheme should expand to 10 000 students. The National board of education had the same criteria the second year of the pilot scheme as for the first but another criterion was added. It concerned the extended number of students. They should be distributed over the country to municipalities of varying size and characteristics. The recommendations by the trade associations regarding the workplace training were even more important in the second year of the pilot scheme. All together the local school boards applied to pa rticipate with 15 400 students. About 10 400 students could participate in the second year of the pilot scheme. Thus, a selection of local boards and the dimension of their participation were made also the second year.

The third year of the pilot scheme has not been evaluated. The number of schools in the third year was very much the same as the previous year, since the number of students in the pilot scheme was extended by only 1 200 students.

5 Data and method

The research material consists of data taken from the Longitudinal register of education and labour market statistics (LUCAS) from Statistic Sweden (1999a). The register consists of data on education and labour market status for the whole Swedish population of work-

ing age (16-64 years). The register has data from 1990 until 1998. The research material gives us the opportunity to use the "natural experiment" that took place during the years when the pilot scheme with the three-year vocational programmes was in full swing. Due to this we are able to compare the young adults with a three -year vocational education with those with a two-year vocational education in the same vocational field.

Our investigation group consists of young adult born in 1974 and who left the nine-year comprehensive school at age 16 in 1990 and continued to a three -year vocational program the same year and completed their three-year programme three years later. We have two comparison groups. One is born the same year as the investigation group, and continued to a regular two-year program in 1990 and completed two years later. The other is one year younger (born in 1975) and left upper secondary school with a two-year vocational educ a-tion the same year as the investigation group. Thus, we have only included young adult who have completed their education and training without any delay both in the investiga-tion and in the comparison groups. We will compare young adults in investigation and comparison groups by the vocational field of their programme. Young men with an industrial technology programme will be compared with young men with the correspond-ing two-year metal work programme etc.

We have not included those young adults who participated in a two- year vocational programme, but who directly continued with an extra third year in the upper secondary school. This third year was not initially planned for and we have no information about the containt of this third year for the majority of these students.

Tabell 4 gives the two- and three-year vocational programmes which will be compared in the study.

Table 4. Two- and three-year vocational programmes

Two-year vocational programmes	*Three-year vocational programmes*
Building and construction	Building and construction
Electrical and telecommunications engineering	Electrical and telecommunications engineering
Motor engineering	Motor and transport engineering
Retail trade and clerical work	Commercial
Metal work	Industrial technology
Food manufacturing	Food manufacturing
Food manufacturing, option restaurant	Restaurant
Nursing, option child and youth caring	Nursing
Nursing, option caring	Caring services

Since the transition to the labour market usually is a more or less long process (Arnell - Gustafsson & Skjöld, 1990; Murray, 2000) it is important to follow the young adults during several years. The young adults will be followed on the labour market from 1993 until 1998. The rather long period of follow-up makes it possible to study in what sense the young adults have successed to have a permanent link to the labour market. The employment status and wages for the young adults will be studied.

Since it was the municipality that applied to participate in the pilot scheme the indvidual student had limited possibilities to chose between a three- or a two-year vocational program. The effect of selection will therefore probably be much smaller than in a study of students from the regular programmes in the upper secondary school. Furher, there are no reasons for the employer to think that the three-year vocational programmes have another recruitment than the two-years. Possible differences between these young adults with a two- or a three-year vocational education and training can therefore to a great extent be related to differences in their education.

6 Results

6.1 Are the students in the three-year vocational programmes a selected group?

As noted in section 5 those young adults who participated in the pilot scheme in the three - year vocational programmes might be a selected group. In order to examine whether there are any initial differences between the investigation and comparison groups we have studied their grades in the leaving certificate from compulsory school. *Table 5* shows the results.

The young men who completed a three-year industrial technology programme seem to have a slightly higher average grade from compulsory school than youn g men who participated in the two-year metal work programme in the ordinary system. Almost no differences are found between men with a two - and three-year education in the other vocational fields.

For the young women there is a somewhat larger difference between those with the three-year nursing education and those with the corresponding two-year education. Ho wever, in the programme caring services we observe that the women with a three -year education have even a lower average grade than the women with a two -year education.

For the mixed gender programmes we find that both young men and women who participated in the three-year commercial and three-year restaurant have a somewhat higher average grade than those young men and women who participated in the corresponding two-year programmes. No differences are found between young men and women who participated in the three- or two-year food manufacturing programme.

The above results indicate that there exists a selection bias into some of the three-year vocational programmes, but these differences are limited (except for the three-year nursing programme) so the selection bias ought not to be a great problem in the study.

Table 5. Grades in the leaving certificate from compulsory school by vocational

programmes

Programme	Year of ending the programme	Men N	Men Average grade	Men Std	Women N	Women Average grade	Women Std
Industrial technology	3-year 1993	1060	2,5	0,44			
Metal work	2-year 1993	599	2,2	0,40			
Metal work	2-year 1992	993	2,2	0,43			
Electrical & telecommunications	3-year 1993	626	3,2	0,35			
Electrical & telecommunications	2-year 1993	913	3,1	0,38			
Electrical & telecommunications	2-year 1992	1672	3,1	0,36			
Motor & transport engineering	3-year 1993	696	2,8	0,37			
Motor engineering	2-year 1993	959	2,6	0,38			
Motor engineering	2-year 1992	1432	2,6	0,42			
Building & construction	3-year 1993	324	3,2	0,32			
Building & construction	2-year 1993	1152	3,0	0,38			
Building & construction	2-year 1992	1953	3,1	0,37			
Nursing	3-year 1993				217	3,6	0,34
Nursing	2-year 1993				691	3,1	0,50
Nursing	2-year 1992				1235	3,2	0,46
Caring services	3-year 1993				1535	3,1	0,45
Caring services	2-year 1993				875	3,2	0,50
Caring services	2-year 1992				1288	3,3	0,48
Commercial	3-year 1993	220	3,1	0,39	407	3,2	0,37
Retail trade & clerical work	2-year 1993	625	2,7	0,36	1299	2,8	0,39
Retail trade & clerical work	2-year 1992	842	2,8	0,35	2261	2,9	0,38
Food manufacturing	3-year 1993	66	2,6	0,39	78	2,8	0,43
Food manufacturing	2-year 1993	116	2,6	0,42	88	2,9	0,50
Food manufacturing	2-year 1992	121	2,5	0,45	112	2,8	0,49
Restaurant	3-year 1993	106	3,3	0,31	169	3,4	0,30
Food manufacturing - option restaurant	2-year 1993	340	3,0	0,43	504	3,1	0,40
Food manufacturing - option restaurant	2-year 1992	537	3,0	0,37	822	3,2	0,36

6.2 Employment

Unemployment was continually very high during the 1990s in Sweden until 1998 when unemployment rates began to decrease. Among young adults it was even higher. The transition from school to work has therefore been difficult for many young people during the 1990's in Sweden. In general, the employment rate decreased among young people and young adults already in the beginning of the 1990's. The employment rate for young adults aged 20-24 was 11 percent in 1990 and 7 percent in 1998 (Statistics Sweden, 2001). The most important criterion on the situation on the labour market is therefore if the young adults had got a job or not. The wages are usually not very low for young adults since the unions and the employers have agreed to equal minimum wages irrespective of age for the same kind of job in Sweden. Thus, on the ordinary labour market there are no special wages for young adults. Instead they have more difficulties to get a job than adults of working age (Wadensjö, 1987).

Men

The employment rates for the men with a three-year and a two-year education in the four different vocational fields (industrial technology – metal work, electrical and telecommunication engineering, motor and transport engineering – motor engineering, and building and construction) show a similar pattern in all four vocational fields. The employment rates converge at the end of the studied period. The employment rates differ to some extent during the first years of investigation, but seem to disappear in the last two years. The young men with a two-year vocational education who left upper secondary school in 1992 had a higher employment rate in 1993 than the other men. However, their advantage disappeared already the following year. In the following years they had very much the same employment rate as the men with a three-year vocational education.

The men with a two-year vocational education who left school in 1993 had a somewhat lower employment rates than the men with a three-year vocational education during most of the investigated period. In the last year this difference almost disappeared. The only ex-

ception was found among men with a building and construction education. Men with a three-year education had a somewhat lower employment rate than the men with a two-year education in the last to years.

Women

Two programmes, which were dominated by women, nursing and caring services, are investigated. The employment rates for women with a three-year and two-year vocational education show a similar pattern. The employment rates for the different groups converge at the end of the investigated period. For women with a nursing education they converge already after three years, i.e. in 1996 but not until 1998 for women with a caring services education. The young women with a three-year nursing education had lower employment rates than the women with a two-year education in the first two years and afterwards they had almost the same as these women. The women with a two-year nursing training who left school in 1992 had an advantage the first four years compared with the women with a three-year education, but it disappeared in 1996.

Women with a three-year caring education had higher employment rates in the first two years compared to the women with a two-year caring education. However, in the following years of the investigated period they had only a small advantage compared to the women with a two-year education who entered the labour market at the same time as they did.

Men and women

Most vocational programmes are either dominated by men or by women. Only a few vocational programmes have a mixed gender composition. The largest programme was commercial in which a third of the students were men. The second largest mixed vocational programme was food manufacturing. The other vocational programmes with a mixed composition are much smaller. The mixed vocational programmes have a special interest because men and women with the same education can be compared. We have studied men and women in the two largest programmes. In order to compare the participants in the

three-year food manufacturing programme and the three -year restaurant programme we have divided the participants in the two-year food manufacturing programme into two options: a) food manufacturing and b) restaurant.

The employment rates for men from the mixed gender programmes show a convergent pattern between the two- and three-year vocational programmes. The difference in e mployment rates is very small in the last two years of the investigated period. Highest e mployment rates were found among men with a two-year training of the same age as men with a three-year training but who left school a year earlier. Thus, the men with an extra year of training from these vocational programmes had no advantage of an extra year during the first five years on the labour market, in their chances to get a job.

The women within the same vocational fields show a different pattern compared to the men. Both women with a three- year commercial education and women with a three-year restaurant education have an advantage compared to the women with a two-year education in the same field during the whole period, except the first year in 1993 for the women with a three-year commercial education. The women with a three -year food manufacturing education show rather similar employment rates as women with a two -year food manufacturing education and who entered the labour market in 1992. The women with a three-year commercial education have an advantage compared to women with a two-year office work education during the whole period, except for the first year. The women with a three-year restaurant education have a wage advantage compared to the women with a two- year education during the whole period.

The above results show that women with a three-year education in these vocational fields have a somewhat higher employment rate than women with a t wo-year education in the same filed.

6.3 Wages

In the following section we will study the wages for the investigation and comparison groups.

Men

The average wages for the four male dominated vocational programmes all show a similar pattern, small and diminishing differences between young men with a three- and young men with a two-year vocational education.

The wage advantage for the men from three-year programmes was hardly visible in three of the male dominated vocational programmes. Only men in the three -year industrial technology programme had a very small wage advantage in the second part of the investigated period.

Men with a two-year training who left school in 1992, a year earlier than the two other groups, had a somewhat higher average wage in the beginning of the investigated period. The men with a three-year education caught up after only one year (with the exception of the building and construction programme). The men with a two- year education who also left school in 1993 did also catch up, but a few years later.

Women

The wages for the women also show small differences at the end of the investigated period. In contrast to the men the average wage differ somewhat in the first years.

The average wage for women with a three-year nursing education was not higher than for women with a two-year education who left school in the same year in 1993 during the whole period of investigation. The women with a two-year nursing education who left school a year earlier had a higher average wage the first two years, but this advantage diminished the following two years of the period. Thus, they had an advantage of entering the labour market a year earlier.

The average wage for the women with a three-year caring education was somewhat higher in the first years than for women with a two-year caring education who left school the same year. But this difference diminished by the end of the period. Women of the same age, as the investigation group, with a two-year caring education who entered the labour

market one year earlier had very similar average wage as the investigation group, although it varied somewhat the first years.

Men and women

The average wages for mixed gender vocational programmes show that differences in the average wages between the compared groups of men are somewhat larger in the beginning than in the end of the studied period. Only a very minor wage advantage is found for the men with a three-year education compared to men having a two -year education at the end of the period in the commercial and restaurant programmes. Earlier in the studied period their advantage is not visible or varies between advantage and disadvantage. However, the men with a two-year education who left school the same year as the investigation group had a somewhat lower average wage than the men with a three -year education.

The men with a three-year food manufacturing education had no wage advantage in comparison to the men with a two-year education who left school the same year in 1993. In contrast to the men in the commercial and restaurant programmes the men with a two-year food manufacturing education who left school in 1993 had a persistent small wage adva n-tage during the whole investigated period.

For the women with a three-year education from the mixed gender vocational programmes a small wage advantage is observed among women from all three vocational programmes at the end of the investigated period. The women with a two-year education who left school in the same year as the investigation group have lower average wage during the whole period, but they caught up at the end of the investigated period.

7 Conclusions

In this study we have studied the labour market situation of young adults with a two-year and young adults with a three-year vocational education in upper secondary school. These

young adults have been compared in order to investigate whether the labour market situation has been more favourable for those with a three-year vocational education than for those with a two-year education. We found no advantage for young adults with a three-year education in most of the studied vocational fields. Only marginal advantages in a few of the studied fields were found.

The employment rates were only higher for women with a three-year restaurant education compared to women with a two-year education in the same field. The wages for men with a three-year education did not differ from the wages for men with a two-year education in the same field during most of the studied period. However, in most of the vocational fields the men with a three-year education ended up with a minimal wage advantage the very last year of the investigated period. Men with a three-year industrial technology education had a minimal wage advantage not only the last year but for a four-year period.

The wages for women with a three-year education in food manufacturing had a minimal wage advantage in comparison to women with a two-year education in the same field during investigated period except the first year. The other women with a three-year education had a minimal wage advantage only in the last year.

Thus, the results indicate that another year in a vocational programme had hardly any visible value in the labour market in most of the investigated six-year period. However, in the last year of investigation we found a minimal wage advantage for the young adults with a three-year education in many of the studied vocational fields. Is this small advantage the beginning of an increasing wage benefit for another year in upper secondary school or is this advantage only a random effect?

We have now only studied the value of a three-year vocational education in the labour market in the short run. We do not know the value in a longer time perspective. The three-year vocational programmes were also quite new for the employers, although many local employers were engaged in the work place training. Thus, the employers did not know how to judge the merit of an extra year. Moreover, another aim of the reform was to facilitate transition to higher education. This aspect of the reform has not been studied here yet,

but will be included in the study later. Other effects of a three -year vocational education such as better self-confidence, a higher motivation to continue to upgrade achieved qualifications etc. is not included in the study. In order to investigate these aspects, new data must be collected.

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Appendix A – Two-year vocational programmes

Building and construction
Electrical and telecommunications engineering
Motor engineering
Distribution and clerical
Retail trade and clerical work
Metalwork
Community care
Clothing manufacturing
Nursing
Agriculture
Forestry
Gardening and landscaping
Food manufacturing
Process engineering
Woodwork
Production and maintenance engineering
Consumer studies

ECER,
LILLE, 2001

TAKING CONTROL of their lives?

AGENCY IN YOUNG ADULT TRANSITIONS IN ENGLAND AND THE NEW GERMANY

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BACKGROUND

This research builds on our previous Anglo-German and UK studies[1], which have contrasted the regulated German and unregulated British approaches to transitions into the labour market. In this new study the ways in which social changes have impacted on the lives of individuals are central to the rationale. The Eastern and Western parts of Germany shared a common culture but operated totally different socio-economic systems during communism. West Germany and Britain had different versions of the same socio-economic system, but different cultural histories. Britain and Eastern Germany have experienced, from different starting points, strong effects of market forces and deregulation of previous systems. Government policy in both countries is now focused on 'people taking control of their own lives'.

This project has explored comparatively the life experiences of 900 young adults in the under-researched 18-25 age group. The sample, drawn from the three cities of Derby (D), Hannover(H) and Leipzig (L), consisted of 300 students in higher education (HE), 300 unemployed (U) and 300 employed (E) young people. In answering the question posed in the title, the research has shown these young adults to be struggling to take control of their lives, while the effects of those struggles are bounded in important ways by wider societal features as well as social background and institutional environments. Through a range of empirical encounters with young adults in the chosen 'terrains' we have developed the concept of *bounded agency* to explore and explain experiences of control and personal agency of 18-25 year olds in the settings of higher education, employment, unemployment and in their personal lives.

To develop a conceptual scheme for investigation of the individualisation 'thesis' in the context of theories which explain structure and agency in different ways, we have taken the work of Beck (1992, 1998) and Baethge (1989) as theoretical sketches to be explored, contested and developed. We have expanded the continuum set out in the original proposal and located these and other theoretical stances within the dimensions of structure-agency, internal-external control, social reproduction-conversion, as shown in Figure 1. This has provided the basis for our conceptual scheme. The metaphor which portrays the research participants as 'actors in the social landscape' has been used as an heuristic device in exploring the meanings of the data.

1. In collecting a unique body of new evidence, a high level of cross-institutional and international collaboration has produced valuable data sets including very detailed quantitative survey findings from the total sample of 900, together with a rich collection of group interview transcripts.
2. In deepening knowledge of the relationships between structural features and feelings of control, we used questionnaire and group interview data to compare the experiences and orientations of young adults in the matrix of nine institutional settings and localities which structure experience and action in different ways, focusing on the 'social regularities'. We also investigated gender and social class differences in feelings of control and indicators of agency.
3. To develop an improved understanding of the factors involved in becoming socially defined as independent and personally effective or (conversely) marginalised in different settings, our analyses of the interview transcripts were triangulated with the questionnaire data. We also drew on case history and key informants' data from the earlier projects identified in the proposal[2], using these to inform the interpretations of our new data.
4. To involve researchers and users (young people, policy makers, practitioners) in debate about the most effective ways to support transitional processes from the earliest stages, we produced an initial pamphlet on emerging

[1] Published as Bynner and Roberts (1991); Evans and Heinz (1994); Evans, Behrens and Kaluza (2000)
[2] Particularly our analysis of transition behaviours and career outcomes (Evans & Heinz 1994, Evans et al 1999)

findings and secured support[3] for 3 international seminars and workshops for researchers and users. These were held in Hannover, Leipzig and Derby respectively. Our dissemination programme is linking with planned Programme events to the end of the Programme in 2003 as well as engaging a wide range of users through presentations and web-site communications.

METHODS

There were three overlapping 'layers' of research, as follows.

- Information gathering--documentary analysis and the gathering of as much information about the young people, their colleges, workplaces and their contexts as possible.
- Structured questionnaires-administered to samples of approximately 100 respondents in each of the settings, producing mainly quantitative data.
- Group interviews-with sub-samples drawn from the questionnaire respondents in each of the settings, producing mainly qualitative data.

The methodological stages outlined above were used to work a way into young people's subjective perspectives on transitions and status passages in work, education and their personal lives. The use of both structured and unstructured techniques meant that several different viewpoints (e.g. official, unofficial, institutional, group, individual) were represented and triangulation of methods and of data sources strengthened the validity of the study's findings. Our aim has not been to draw conclusions about the wider populations of England and Germany, but to uncover commonalities and differences in the experiences of samples of 18-25 year olds matched by institutional setting in three cities, with nation providing part of the socio-political and structural environment which affects experience in significant ways. Our extended analysis of the socio-political environments has been published in Evans, Behrens and Kaluza (2000)[4].

With the co-operation of the College and University Principals, their Heads of Department and the subject tutors, Chambers of Commerce, Labour Administrations and a range of voluntary and community organisations, broadly representative samples were obtained for each type of 'institutional setting' in each locality. Close liaison between the team members allowed adjustments to made to ensure that the social categories of age, gender, occupational /educational level were adequately represented, as well as broad fields of employment and study, as appropriate. Nine hundred questionnaires were completed. The interview samples were selected from questionnaire respondents who had agreed to be part of the group interviews, with the aim of maximising comparability of the groups. The aim was to conduct 18 group interviews: two in each of the three settings in each of the cities, involving in total at least 108 of the survey participants. In practice, 21 interviews were carried out involving 136 participants[5].

The project is contributing to the reconceptualisation of agency as a process (Emirbayer and Mische 1999) in which past habits and routines are contextualised and future possibilities envisaged within the contingencies of the present moment. Accordingly, the questionnaire was structured to capture features of past lives, current experiences and orientations, and future perspectives of our research participants. The German and English versions of the questionnaires and group interview frameworks were developed together and piloted.

The referees' comments usefully pointed out that the differences in meanings would have to be addressed. As with all international studies, particular issues arise over comparability of educational level and occupational level. Our approach, informed by previous work (Bynner and Roberts 1991, Evans & Heinz 1993, Evans et al 2000), ensured

[3] The Hannover workshop was held at EXPO (World Exhibition) 2000 with the support of the UK pavilion; the Leipzig and Derby workshops were funded by the Anglo-German Foundation.

[4] This book, published by Macmillan in 2000 is not identified as nominated publication despite its high impact, as it combines analysis carried out under both the Anglo-German Foundation funded study and the present ESRC study.

[5] The further interviews were undertaken where it was considered desirable to have additional interview material available because of differences in balance and emphasis and in the conduct of the interviews.

that these differences in meaning were taken into account from the outset and were borne centrally in mind in the analysis and interpretation of the data. The analysis, statistically, utilised cross tabulations, factor analysis, index construction and correlations including some multivariate work. The qualitative interview transcripts were fully transcribed, coded and analysed with the aid of Nvivo. The aim throughout was to link the three layers of qualitative, quantitative and documentary data to gain a full understanding of the positions of our respondents in their 'social landscapes'.

RESULTS

Our starting point was to analyse the data for each of the three groups (HE, E, U) separately, comparing the findings for each of the groups across and between the three localities (D, H, L). Our first nominated publication, which concentrates on unemployed young adults in the three cities, illustrates how we then set our initial analyses in context, combining sources of data to arrive at an initial understanding of the position of each group. Our next stage of analysis extended to 3x3 comparisons across groups and cities, first exploring questions of structure and agency (as represented in our second nominated publication) and then focusing on the initial research questions set out in our proposal. A factor analysis carried out on the full quantitative data set identified twelve factors of importance in the analysis of agency and control. Twelve viable CONTROL, AGENCY and FUTURE factors have been identified through an initial factor analysis (see Appendix 2) and scaled into indices. A further analysis identified 6 SELF factors:

S (1) sociable/confident
C(1) fulfilled work life
C(2) fulfilled personal life
C(3) believes opportunities open to all
C(4) believes own weaknesses matter
C(5) planning not chance
C(6) believes ability not rewarded
A(1) active career seeking
A(2) unlikely to move - also F(1)
A(3) politically active (group)
A(4) helping/people career oriented
F(2) negative view of the future

SELF(1) general self confidence
SELF(2) social self confidence
SELF(3) personal strengths
SELF(4) work strengths
SELF(5) achievement barriers
SELF(6) career/course choice

Subsequent analysis used the full set of qualitative, quantitative and documentary evidence to explore the emerging findings further, with reference to our conceptual scheme, related research and national contexts.

Actors in the social landscape

One of the most striking findings has been the almost universal recognition of the importance of qualifications. The achievement of qualifications has the status of a universalised goal. The means for achieving these goals have diversified in both countries, but more in England than in Germany, and our respondents in the two German cities were more aware of the effects of ascribed characteristics of gender, ethnicity and social class than their counterparts in the English city (Table 1). More respondents in Derby considered that qualifications override other social characteristics in shaping life chances.

To provide insights into the experiences and orientations of young people differently positioned within the social and institutional 'landscapes' in our three chosen localities, analyses compared the experiences of each group in turn across the three cities, as a precursor to thematic analysis across the full matrix. The experiences of our respondents within each of the three settings are compared in separate papers (see Evans et al(2001) and Behrens and Evans (2002). For the purposes of this presentation, I concentrate on the thematic analysis across the full matrix.

Comparing across settings and cities: the four research questions

The four initial research questions outlined in our original proposal concentrated on comparisons across areas and settings. This section discusses our findings for each question in turn.

Feelings of dependency and control

Our *first research question* asked whether delayed entry to the labour market has created extended periods of dependence in the experience of 18-25 year olds and whether the extended, more institutionalised transitions of Germany were reflected in greater feelings of dependence and lack of control in the German groups. Our results showed that feeling of partial dependence on parents *in all respects expect the financial*, was felt by most, more than 60 per cent in all settings and cities. Age only affected financial independence substantially in the employed group, with three quarters of 22-25 year olds in employment reporting complete financial independence in Derby and Leipzig, slightly fewer in Hannover. Turning to other forms of parental help and support, a minority of between one fifth and two fifths considered themselves completely independent of those forms of support in the three cities in each setting. The rest saw themselves as partially independent.

In summary these findings run counter to the hypothesis that extended transitions in education and training have elongated feelings and experiences of 'dependency' on family in negative ways. If this were the case, there would be marked differences in feelings of dependence on parents between the group which has made full transitions into employment and the two groups experiencing extended transitions in education, training or schemes. Our results showed that *all groups feel partially dependent for emotional and wider forms of support, the differences between the employed group and young people in the other two groups being confined to the financial forms of dependence.* Here, the higher education group felt most financially dependent, irrespective of age, and the financial pressures experienced by the Derby group were apparent in the interviews. The fact that half of the unemployed respondents in Derby reported themselves to be financially independent probably reflects the lack of family/parental resources available to support them. (Christie et al 2000). There is also evidence of dependency on state support and of financial hardship, stress, conflict with parents and experiences of exclusion in the unemployed group. It is true however, that many more young people than previously (pre 1990) are entering higher education after the completion of schooling and initial further education. The phenomenon of youth unemployment extending into the third decade of life and affecting more 20-25 year olds means extension of high levels of insecurity rather than extended dependence on family for many young adults, particularly in Derby where welfare and grants eligibility has reduced most. For most young adults, leaving home and setting up separate living arrangements remains the primary indicator of independence. The most striking finding was that the *English groups scored higher than their German counterparts on most measures of control and individual agency in all three groups*. This was consistent with the German groups' greater awareness of the influences of external structures on life chances and supports the hypothesis that the institutionalised German framework is associated with lower feelings of control. 'Dependence' on family is not, however, always negatively experienced.

Common experiences of gender, 'race' and social class

The *second research question* asked how far our respondents shared common experiences of gender, race and social class. The group interviews proved a particularly powerful vehicle for exploring these issues, while providing data which was invaluable in interpretation of questionnaire results. Our design also enabled us to make comparisons by gender and social class, to explore some of the structural foundations of variations in control and agency exhibited by the respondents[6].

Gender

The majority of group interview participants saw the effects of gender in life chances as outweighed in importance by the effects of educational qualifications, effort and performance. In this respect the qualitative evidence was consistent with the questionnaire response patterns. Despite this, there was awareness that particular sectors of the labour market remain biased towards one or other sex. Beyond this, more subtle forms of sexism were seen to be operating, such as people being stereotyped by the way they look and women having to perform better than men in

[6] while the samples reflected the ethnic composition of the population in each of three settings in each locality, the numbers were insufficient for conclusions to be drawn .

order to gain an equal degree of respect. *There were frequent references to 'competence' overriding other factors, but within an overall awareness that there are differentials in the levels and status achieved by females and males in employment and the economy.*

More generally, the interview transcripts revealed awareness of gender alongside the individual attribution of success, with a sense of acceptance by young women of the need to prove oneself more as a female. While there were quite powerful discourses around gender in many of the groups, there were differences in emphasis in the perceptions of scope and limits for choice and equality of treatment. Even the English groups appear more differentiated than Arnot (2000) has suggested. The demands of childbearing and childrearing were at the forefront of the thoughts of our German female respondents.

In the German interviews, although women were generally seen as having the same chances as men at work, the view was often expressed that women must at some point 'choose between work and family'. In the questionnaire responses, many more women than men gave priority to 'child-rearing possibilities' as something they wanted from work in all areas, but more in Germany than in Derby. However the largest proportion in any group who considered this a priority was 50 per cent (Leipzig females in higher education). There is little evidence of the emergence of the 'new man' who pays close attention to family considerations.

Differences in male and female views of equality in society as measured by the factor 'believes opportunities are open to all' were found only in Leipzig, where females generally believed less that equality existed. This was the case irrespective of their situation in education, employment or unemployment.[7]

Across all areas, males had more experience of being unemployed on more than one occasion. In Hannover and Leipzig, males from working class backgrounds were most likely to experience this[8]. In Derby the number of male respondents experiencing multiple employment was only slightly higher than females across the social spectrum. Males in Hannover and Leipzig were also found to have been significantly more active in searching for work(A1). *These findings together appear to confirm that males are having a tougher time in penetrating the labour market and finding stable employment, and that this is the case particularly for males of working class origin in Hannover and Leipzig.* In Derby, female respondents were found to view their futures significantly more positively than males.

There was evidence of females behaving with a higher degree of agency than males, at least in some respects. For example, *females tended to leave the parental home earlier than males , and were more open to the possibility of moving away from the area they currently lived in. These are examples of agency at an individual level. They also exhibited higher levels of collective agency in that they were found to be more politically active* . This difference was apparent in the most difficult environments. A possible explanation is that females are more resilient, becoming disengaged less easily than males. Remarkably consistent differences emerged across the three areas between males and females in higher education which appeared to reflect greater agency on the part of the female respondents.

'Race' ethnicity and nationality

The findings shown in Table 1 mask the fact that 53% of ethnic minority respondents in Derby thought that race had a considerable effect in shaping life chances (compared to 17% non-minority) and 30% thought that gender had a considerable effect (compared to 18%). In group interview responses, the groups had rather less to say on the topic of race than gender, and gave fewer examples, except in Leipzig, where responses reflected the high proportions who perceived 'race' as important in life chances. Issues of 'nationality' aroused strong feelings and reflected concerns about the 'xenophobia' reported in recent press coverage of developments in the Eastern part of Germany. That is not to say that the attitudes were themselves primarily xenophobic. The attitudes expressed recognised that non-Germans suffer particular forms of overt discrimination and that this fundamentally affects life chances.

[7] The greater visibility and general awareness of social inequalities in Leipzig, compared with Derby and Hannover, is disproportionately attributed to female perception in the area. This is not surprising in the light of evidence (Diewald 2000) that women were among the most downwardly mobile groups in the East of Germany following reunification.

[8] a multivariate analysis showed that 'having a greater number of periods of unemployment longer than four weeks was related to perception of 'chance', political inactivity, being male, older and having had more than one type of setback.

Similarly, discussion of social background is influenced by different meanings in Germany, particularly in Leipzig where class pride (for manual workers and farmers) in the GDR was replaced by class-based disadvantage for the former at least. The interview approach aimed to get insights into this is various ways, through the questions which asked about influences of family background, obstacles, both material and social, through open questions about the factors which affect and influence occupational destinations and 'career'. Ethnicity of the respondents reflected the distribution in the local population in each institutional setting, as far as possible, but the differences in the nature of the population groups and the numbers were insufficient for statistical analysis to be meaningful.[9]

Social class

Social class awareness is shown to be mixed in with family and gender dimensions in complex ways, with much reference throughout the interviews to the importance of 'social connections' and the invisible social factors, beyond qualification and competence, which affect success.

English respondents were more likely than their German peers to change their job expectations, usually (but not always) in an upwards direction. English respondents were also more independent of their parents in all groups (Table 2). *Social class was perceived to be more important in Germany (Leipzig 56% stating this has considerable effect, Hannover 45%) than in England (Derby 28%).* In the group interviews, a minority of participants were willing to talk about their life experiences directly within a social class perspective, but many respondents, especially students in Germany, were aware of the influences and benefits of their parents' occupational background. The effects of 'framing' in limiting what might be seen from any particular social position (Bloomer 1999) came through strongly in the interview transcripts, but equally there were many indicators that forms of social capital were seen as being convertible and expandable through qualifications, making new connections and taking chances. This came through in the views, expectations and experiences of the respondents in all groups, particularly in the group interviews. However, class-based limits are recognised by the majority in all three localities and most disbelieve that 'talent always rises to the top'. Only one quarter of the Derby respondents felt that social class/status does not affect your chances in life' although this is higher than the very small minorities of the Germans who were prepared to agree with this statement.

Relatively few of the items and measures designed to identify the dimensions of agency and control in their lives were significantly associated with the respondents' social class, where this was measured by father's occupation[10]. There were many more significant associations with their present setting. One variable which is of particular significance in this research, is the orientation towards long term planning, as reflected in (C5)[11]. As well as being an indicator of proactivity and of some forms of agency and control, theoretically this variable is of great interest given the central place given to people becoming the 'planning office for their biographies' in the theoretical perspectives which emphasise human agency most strongly[12]. This was one of the few variables which was significantly associated with the social class origins of the respondents. The profile of the area samples on this index is represented in Table 3 [13]. *Life chances may have become more determined by their abilities to be proactive but this finding suggests that this is the very characteristic which has structural foundations in social class*[14]. This finding, which we have treated with caution given problems of self report of father's occupation, merits further

[9] Derby has a significant black population, Hannover a Turkish population and Leipzig has an incoming population from Russia and some of the other Eastern European countries.

[10] After exploring NSEC, we decided to use Registrar-General's scale for coding of Social Class, which has in-built problems of comparability because of different definitions of skill level. Because of difficulties of comparing skill level within the manual occupations, (combined with a high level of non-response to this question), a five fold classification has been used for the purpose of analysis: Professional, Managerial, other Non-Managerial, Manual and Never Worked.

[11] composite of items including goal orientation and alignment of career with personal interests.

[12] See Beck (1992), Bandura (1995), Ziehe (1996), Baethge (1989)

[13] bivariate correlation analyses showed that a planning orientation was related to being of managerial class, not being of manual class, having had no major setbacks, leaving full-time education later, being employed and believing that you might move to another area at some point in your career.

[14] It should be noted, however, that the chart masks important differences by setting. In the higher education group for example, it was the skilled non manual which scored highest in the Derby sample.

investigation through the large scale data sets of the panel and longitudinal studies available, preferably comparing the findings on the 'old' categories of the Registrar-General's scale with the new NSEC categories.

Comparing feelings of control:
views of the self and feelings of control in different settings.

Our *third research question* asked whether educational settings foster stronger feelings of control than the employment and unemployment settings in which people experience the full realities of the operations of the labour market..[15] This question, together with our questions about optimism, stemmed from our earlier work with 16-19s in full-time education which showed high levels of optimism, positive expectations and feelings of control even in depressed labour market conditions.

The pattern of responses is strongly indicative of greater feelings of control and agency among those in employment settings than among those in the environments of Higher Education and unemployment (which are both more 'uncertain' but in different ways). The items and factor scores which discriminated most between groups were related to *self-confidence*, reflecting self-trust and feelings of capability to deal with circumstances as they are.

Views on the importance of individual effort, ability and luck in shaping life chances showed a higher belief in ability and effort in the English groups, with higher proportions identifying with the statements 'that getting a job depends on ability' (D 83%, H 65% L 54%)', and that 'people deserve their success' (D 61% H 40% L29%). Although the proportions holding this belief decrease from the HE to the employed group, and from the employed to the unemployed, the majority in all three groups agreed with these statements. Smaller majorities in Germany agreed that getting jobs depends on ability (consistent with the earlier findings) but a minority in both Germany cities held the view that people usually deserve their success[16]. *The statement 'Talent always finds its way to the top' produced much higher agreement from the Derby higher education and employed groups than from their Leipzig counterparts.* About one-fifth disagreed in all cities; many of the German respondents recorded that they didn't know. While these responses from the Derby group suggest a strong belief in individual effort and ability, this does not mean that they are blind to the effects of social status and class in affecting life chances.

Optimism and views of the future:
do confidence and optimism increase or decrease with age and greater experience in the labour market?

The English respondents' belief in the importance of individual effort was found, in previous work, to be accompanied by a degree of optimism, whatever the state of their local labour market (Rudd and Evans 1998, Bynner and Roberts 1991). We asked whether optimism would decline in older age ranges as the realities of the labour market and other constraints were experienced more directly, and compared mean factor scores for the F2 'negative views of the future'. There were no significant differences by age, between the younger (18-21s) and older (22-25s) in any of the settings or areas. Further analysis, however, has produced a more differentiated account, when analysed between settings. *Respondents in the employed and higher education groups reflected the relatively high levels of optimism shown by our previous full-time education and apprenticeship-based groups.* Small differences between respondents with higher and lower occupational status were not statistically significant. The responses of the unemployed groups showed individual attribution of failure to greater or lesser degrees irrespective of age. In comparisons between areas the results suggest that negative views of prospects do begin to bite in the more economically depressed areas, in the 18-25 age range, as people come up against the realities of the labour market.

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[15]We have reviewed the importance of control beliefs with reference to Bandura (1995). In the research we have explored these alongside related self evaluations and views of the self, and carried out analyses to identify the main factors. The expanded SELF factors are given in Tables 2.13-2.18.

[16] These differences were further tested through comparisons of the factor score means, which confirmed that the German sample have stronger feelings than their Derby peers, that individual ability goes unrewarded, irrespective of setting when compared with their Derby peers.

Contradictory responses suggested that respondents the UK groups feel 'forced' into unemployment schemes and therefore not 'in control' while at the same time feeling individually responsible for their predicament. They believed it was down to them to get out of their situation, despite the negative environment. They experienced stress in dealing with their situation, and emphasised 'being realistic' about what they can achieve. *There was little fatalism expressed in any of the interview responses, which were suggestive of frustrated agency rather than lack of agentic abilities or attitudes.* This is consistent with the individual attribution of failure and suggests that compulsion in schemes may be counterproductive, particularly in the UK environment.[17] The responses from the West German samples show that these see the unemployment schemes, which seek to 'imitate' the apprenticeship, as the way back to a 'standardised' career, while in Eastern Germany the schemes are seen as a kind of state-created labour market.

Participation, social life and politics

Post-school learning environments may be pivotal for future patterns of learning, social participation and the exercise of citizenship in later life, yet most attention is given to preparation for work and careers. We asked how far 18-25 year olds are active agents in their lives outside work and training, and how this compared with their 'institutionalised' lives and work values. Table 4 compares fulfilment in work/study, and personal lives[18]. *Respondents in the two German cities reported more fulfilling experiences in their personal lives.* This was borne out in group interviews, which revealed a cultural norm and expectation that one *ought* to make constructive use of personal time and that not to do so is wasteful.

Our findings have shown that individualised market-oriented behaviours are shown most strongly in the setting in which markets have been deregulated and individualised behaviours have been most strongly encouraged or enforced-that of the English labour market. *While the German groups from both Hannover and Leipzig were less proactive in relation to the labour market (Table 5) they showed higher levels of politically active group behaviours involving activities such as participation in political events and engagement in political discussions.* This was underlined when voting intentions and levels of political interest declared by the respondents were examined. Answers to the 'would you vote...?' question suggested quite an important international difference. 73% in the combined Leipzig sample and 78% in the Hannover sample said they would vote, compared to 61% in Derby. These figures mask important differences between groups, with more in the unemployed groups stating that they would not vote. This was not just apathy on the part of the English respondents. 37% did answer the question but said 'no', they wouldn't vote. They seem to be making a conscious decision *not* to do something, as the group interview transcripts confirmed. The German group interview data also suggested a stronger interest and critical engagement in formal politics and political issues than is found in the English groups, although all are highly critical of politics and politicians. *Political activity and engagement also increased with age in all of the groups, a finding which confirms that this is not a phenomenon of young German retaining student identities longer in the more highly institutionalised German environment* but a feature of German society as Gille and Kruger (2000) have also shown. In England, Wilkinson and Mulgan (1995) found that people under 25 years of age were four times less likely to be politically active than any other age group, and claimed that women were 'disconnected from politics.' Our female respondents, like those in Whitty et al's 1998 study, showed more active political engagement than the males (see Gender Section).

There were only small differences between groups in how the respondents fitted their own aims into a social context. Looking at what the respondents 'want most from work' in all three cities (Table 6), only a few consider 'relationships with a wider circle of people' or to 'contribute to society through own or group effort' as important (compared with the importance given to 'good job security', 'good pay' or 'good career prospects'). In this respect, individual action can primarily be seen in the context of one's own need and interests and could be expected to correspond with the extent of individualisation in the social systems. While money rather than security comes out on top for the English respondents, what is of interest is that differences do not emerge more clearly between the English and German groups, in any of the settings. *This suggests another area of universality in the goals and aspirations of young adults, alongside the universal acceptance of the importance of qualifications.*

[17] See also findings of parallel project in the Youth Citizenship and Social Change Programme , C.Harris et al

[18] factors based on experiences of challenge, achievement, initiative and responsibility in work or study settings and in personal lives.

Bounded Agency

The analysis presented in the foregoing section has demonstrated the interfusion of agency and structural influences and that contradictions are some-times apparent in the respondents' positions and views. Dualistic treatments of structure and agency quickly become problematic. In a short report it has been possible only to convey some themes or 'motifs' emerging from the group interviews, and we cannot do justice to these rich engagements which illuminated many aspects of our analysis. Our combined data showed that, despite feelings of lack of control in the least advantaged groups and disbelief in some of the principles of individualism and meritocracy, most research participants attached considerable importance to individual effort and expressed the belief that if people worked hard and achieved suitable qualifications then they should be able to follow their own independent pathway in adult life. Social connections, forging them and 'making them work for you' as well as the importance of image and self-presentation were much emphasised. They are certainly not blind to the influences of economic and social structures, but the least advantaged emphasised that they have to be 'realistic' in their individual aspirations and goals. It was striking that there was little sense of fatalism in any of the interview encounters, with only three interactions out of hundreds coded as displaying fatalistic attitudes. Frustrated agency and struggle characterised the day-to-day experiences of many of the young people who were in disadvantaged situations. In explaining the individual attributions of success and failure within socially structured environments and the almost universal recognition of the importance of 'qualifications', we have looked through the lens of agency as a socially situated process, shaped by the experiences of the past, the chances present in the current moment and the perceptions of possible futures, to find the concept of *bounded agency*. These young adults are undoubtedly manifesting a sense of agency, but there are a number of boundaries or barriers which circumscribe and sometimes prevent the expression of agency. The findings also further challenge the simplistic application of the concept of 'individualisation' in differing socio-economic and cultural environments, in ways which imply or assume uni-linear trends within undifferentiated contexts of 'modernisation'

Theoretical implications

One of our starting points (Rudd and Evans 1998) was to argue that many studies of youth transitions have underestimated the degree of choice or agency evident in transitional processes. While the 'individualisation' thesis places agency centre stage, accounts of individualisation and structuration, as Gudmundsson (2000) has pointed out, are no more than theoretical sketches, which can be developed and contested in 'empirical encounters'. The present research, together with the English and Anglo-German studies which preceded it, offer an accumulating set of empirical encounters through which the limits and possibilities of theoretical and analytical approaches can be considered[19]. Our evidence (Evans, Behrens and Kaluza 2000) suggests that agency operates in differentiated and complex ways in relation to the individual's subjectively perceived frames for action and decision. Thus a person's frame has boundaries and limits which can change over time, but which have structural foundations in ascribed characteristics such as gender and social/educational inheritance, in acquired characteristics of education and qualification and in the segments of the labour market into which these lead. In this and other respects, the hypothesis that a 'structured individualisation' process[20] is apparent in the experience, values and behaviour of young people is supported. While structured individualisation accounts for the variety of experiences and incidences of interrupted or broken transitions in all social groups as well as for the class-based and gender-based linkages in planning orientations and horizons, it shifts the attention back onto the operation of structures rather than understanding agency and the agency-structure interfusion. Goldthorpe's (1998) answer to the agency problem is that a calculation of costs and benefit is involved, while accepting that rationality operates within individuals' horizons and social norms and calling for more cross-cultural studies to illuminate this. Our cross-cultural study did not set out to study the rationality, objective or subjective of our respondents' decision-making, but they revealed the apparent rationality of our respondents' perceptions and actions in relation to the features of the three labour markets involved and their positions in the 'social landscape'. However, these are as well explained by the individually perceived need to maximise their options and minimise social risk as they are by any calculation of 'cost and benefit'. Furthermore, our findings support the arguments that social divisions are becoming obscured by a universalised belief in competence and that this is most advanced in market oriented environments.[21] Our group

[19] Our full treatment of this is in preparation for publication as a sequel to 'From socialisation to post-modernity' (Rudd 1997)..

[20] see eg Heinz (1999) and Roberts (1995)

[21] see, for example, Ball, Macrae and Maguire (2000)

interview transcripts demonstrated how social differences are perceived and collectively experienced but how, in discussion, questions of 'competence, will and moral resolve' permeated and often dominated the discourse. This was particularly marked in extended discussions of gender differences[22].

Our further analysis is considering whether our research participants may be converting social and cultural inheritance into action in new but socially differentiated and bounded ways. The apparent differences in orientations to 'life project planning' may be explained in part by interactions between the generations, and the extent to which parents are able to secure the prospect of 'better lives and opportunities' for their children. The changing but bounded aspirations and expressions of agency may also be explained by socio-cultural influences experienced in their peer groups and institutional settings, as well as by the contingencies inherent in life transitions. There are some important indicators of 'collectivities' in perceptions of the social landscape and common experiences which were well articulated (and may therefore be surmised to be well internalised). Socially bounded agency means that roles and social relations may be redefined as part of the strategy to "take control of their lives", and these redefinitions may have collective and cultural features which extend beyond the scope of the present research.

Conclusions and policy implications

The evidence supports the view that the more insecure and flexible system (represented by the English labour market of Derby) necessitates greater proactivity and the maintenance of the positive approach to 'opportunities'. This arises out of individual attributions of success and failure, which are themselves linked with beliefs that 'opportunities are open to all.' For young adults in Eastern Germany, our previous findings[23] showed that market signals were picked up quickly and, in our 1996-98 case studies behaviours in the Eastern city were aligning with those of our English counterparts as unregulated ways into the labour market opened up. The subsequent reassertion of the Dual System and the introduction of programmes to stabilise and regulate 'broken' transitions into the labour market for 18-25 year olds is similarly reflected in their orientations and expectations. For young adults in the case studies carried out in 1996-1998, agency and active behaviours created chances for some of those in the most precarious situations, to gain newly appearing footholds in the labour market. Our current respondents show, by comparison, less short term proactivity and renewed hopes of ways back to standardised careers through a government created labour market. This is associated with a longer term planning orientation, a different kind of proactivity. But as actors move in these social landscapes, spaces open up for action which is not wholly reducible to the effects of social reproduction or underlying structural features. The concept of 'bounded agency' provides a focus for further consideration of policy issues. Young adults do manifest agentic beliefs in relation to work and their social environment, but encounter frustrations in expressing or acting upon them. There are obviously some constraints in a 'social landscape' that will be very difficult to move or remove, but others might be reduced through new policy initiatives or foci. This point is relevant to a range of services including, for example, teachers, university staff, careers advisers, mentors, employers, health workers and social workers and the research has attracted interest from all of these groups.

Over the last decade the German post-school education and training has come under considerable pressure, particularly the highly regulated and institutionalised dual system. The data concerning future prospects showed that the research participants were quite aware of the limited vocational mobility a vocational training in the dual system offers. In Germany, it would be an advance for the structure of employment and vocational training to be regarded as a system consisting of basic vocational training, higher education and continuing education. The historically grown sectors of the education and training system need systematic links in order to remove 'cul-de-sacs' and barriers. In contrast to the young people in the dual system the students at German universities are given greater responsibility in order to organise the contents of their studies, but students seldom have systematic contact with the labour market. Stronger links between higher education and companies are required and careers guidance/services need to be extended.

A *pluralisation of the training in the dual system would mean core and optional modules to choose from* rather than the requirement to follow a standardised programme. Young adults need to play a part in creating their own learning biographies and the concept of 'Beruf' would become more open. But in any moves of this kind in Germany, particularly in the eastern Länder, *attention needs to be given to ways in which fair and equal access to*

[22] Initial findings on gender were presented in American Educational Research Association Conference 2000 and have been elaborated in a chapter and journal article in preparation for publication.

[23] See Evans, Behrens and Kaluza (2000)

opportunities can be guaranteed and to how the negative effects of individual attributions of failure be countered. In *England*, policies have been over-concentrated on the 'deficits and lacks' of young people in the most precarious positions. *Policies have to ensure that the greatest demands to 'take control of their lives' do not fall on those who are the least powerfully placed in the 'landscape'.* This is the main policy implication for England, which means that agencies working with young people need to emphasise brokerage and advocacy as a primary aim and function, to the extent that young adults perceive and experience this to be as real as the emphasis which is currently placed on their 'deficits'. The findings also show that learning is life-wide and much of this takes place in the non-institutionalised spaces of life with evidence of greater fulfilment and constructive use of personal time in the German groups. The non-institutionalised spaces need to be protected, but policy makers should consider whether there enough non-commercial spaces which allow for creativity and collective expressions of agency and whether those which offer positive support for mutual learning and democratic engagement in society could be better supported. The findings raise longer term issues for those who are concerned with the social fabric and long-term well being of democratic society in both countries, but particularly in England. They are discussed forther in Evans 2001 as part of a new edited collection by Bernard Crick.

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Acknowledgement

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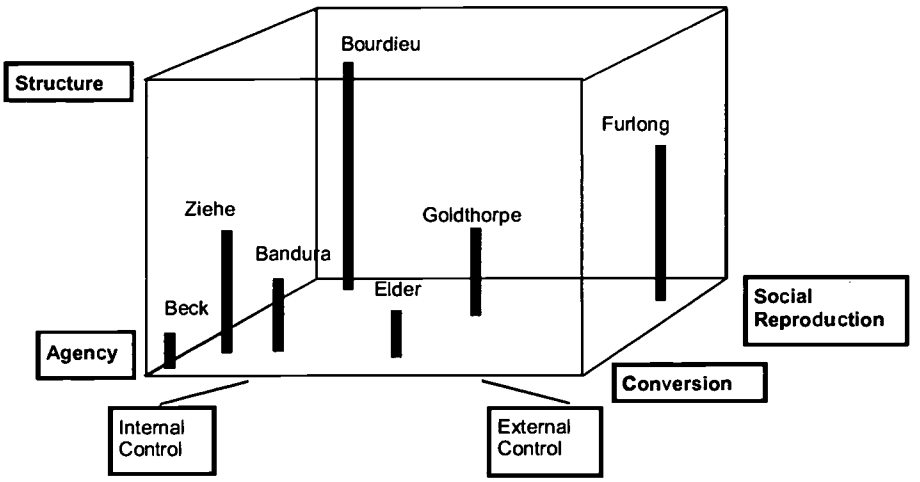
Paper presented at ECER
September 2001, Lille
'Taking Control of their Lives?
Figures and Tables referred to in the presentation .

FIGURES AND TABLES REFERRED TO IN THE TEXT

Figure 1: Conceptual Schema for Structure-Agency



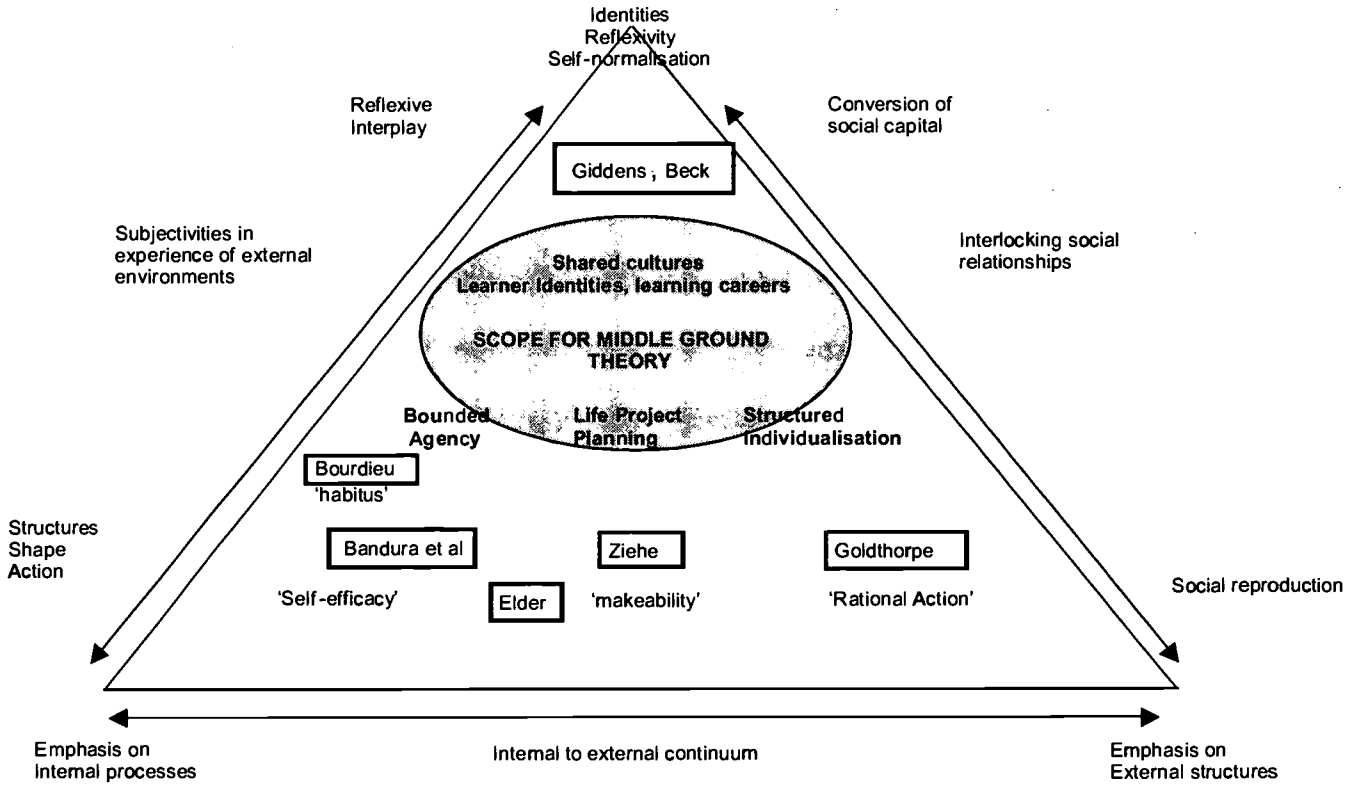


Table 1: Respondents' opinions on the importance of a variety of social characteristics in affecting a person's opportunities in life (numbers and percentages)

Respondents' opinions on the importance of social characteristics in affecting a person's opportunities in life (n=300 in each city). Numbers responding 'of considerable importance'					
	Sex/gender	**Race**	**Social class**	**Family background**	**Education Qualification**
Derby					
1.Higher Ed	20	24	32	28	87
2.Employed	13	13	21	22	80
3.unemployed	26	29	32	21	77
Total	59	66	85	71	244
%	19.7	22.0	28.3	23.7	81.3
Hannover					
1.Higher Ed	26	45	46	31	97
2.Employed	39	58	42	36	94
3.unemployed	29	52	46	25	90
Total	94	155	134	92	281
%	31.3	51.7	44.7	30.7	93.7
Leipzig					
1.Higher Ed	46	80	58	37	96
2.Employed	37	71	53	25	95
3.unemployed	35	67	57	28	81
Total	118	218	168	90	272
%	39.3	72.7	56.0	30.0	90.7

Numbers viewing each factor as having a 'considerable' effect on a person's opportunities

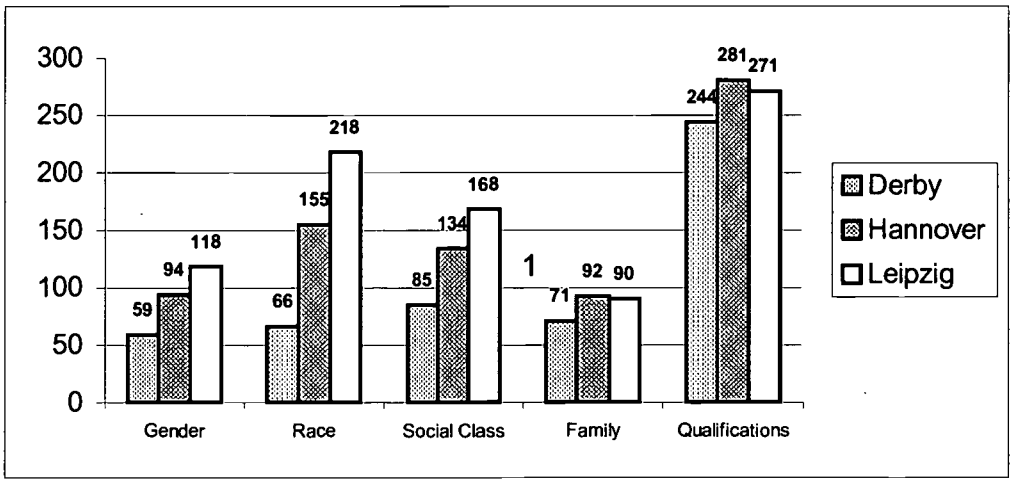


Table 2: Feelings of Dependency and Independence

Percentages of 18-25s reporting complete independence from parents (percentage for 22-25s in brackets)

(N=900, 100 in each setting in each city)

		HE	E	U
A. Financial Independence	Derby	24 (29)	62 (75)	51 (53)
	Hannover	16 (21)	48 (61)	39 (44)
	Leipzig	8 (8)	60 (76)	35 (43)
B. Independence of other forms of help and support	Derby	20 (27)	24 (30)	32 (36)
	Hannover	36 (40)	32 (28)	35 (42)
	Leipzig	21 (28)	34 (44)	25 (28)

Tables 3,4 & 5 are based on comparisons of factor score means

Table 3: Factor 'Planned not chance' by social class within areas (control 5)

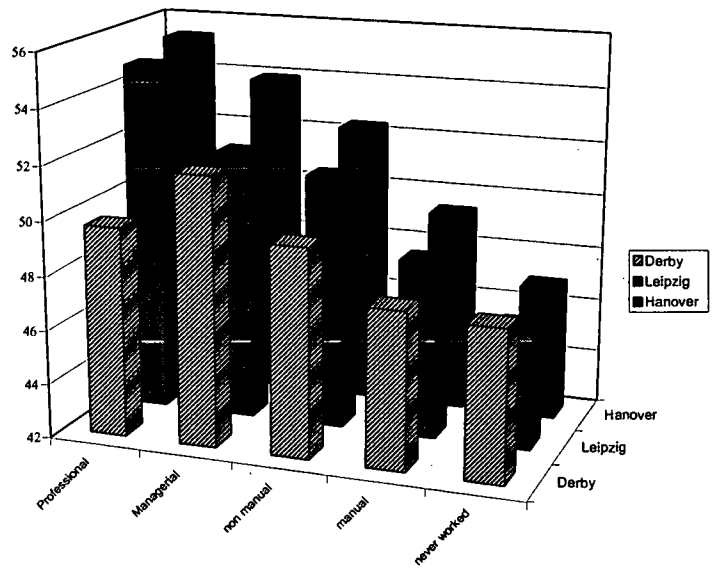


Table 4.1: Students' experiences in work and personal lives

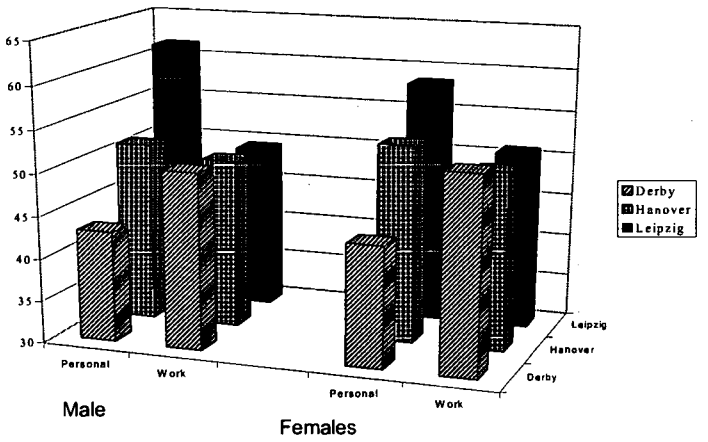


Table 4.2 Young employees' experiences in work and personal lives

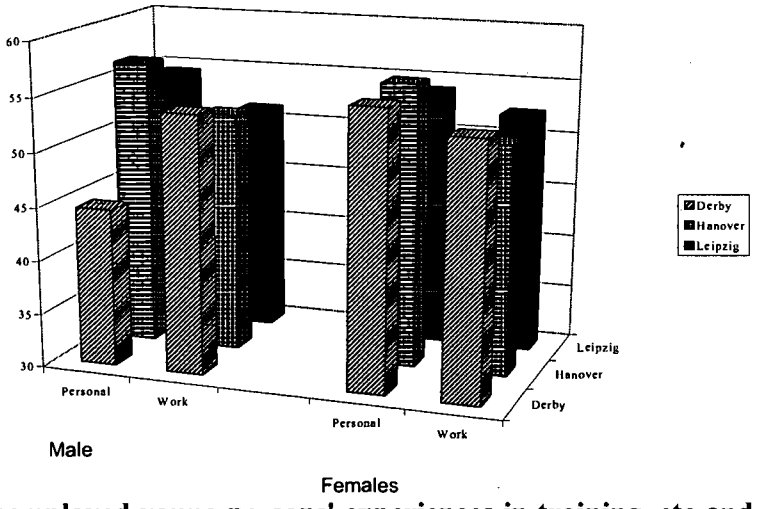


Table 4.3: Unemployed young persons' experiences in training, etc and personal lives

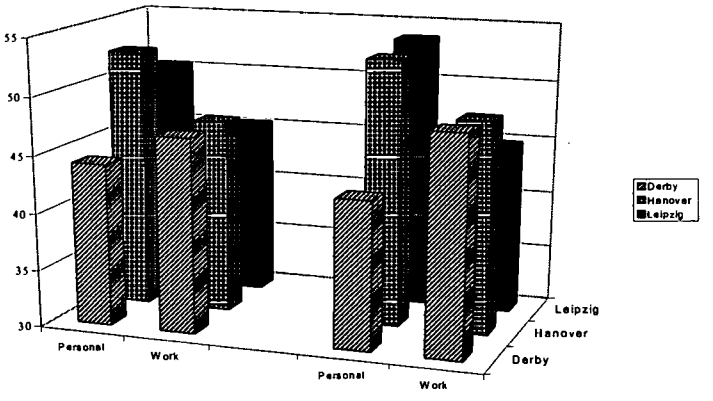


Table 5 Market oriented behaviours

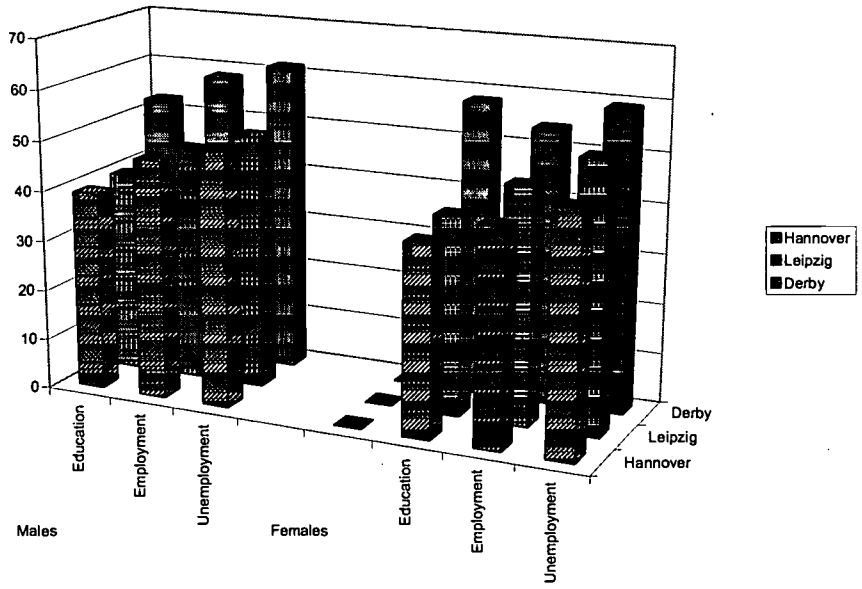


Table 6.1: Work values in employment context (%)

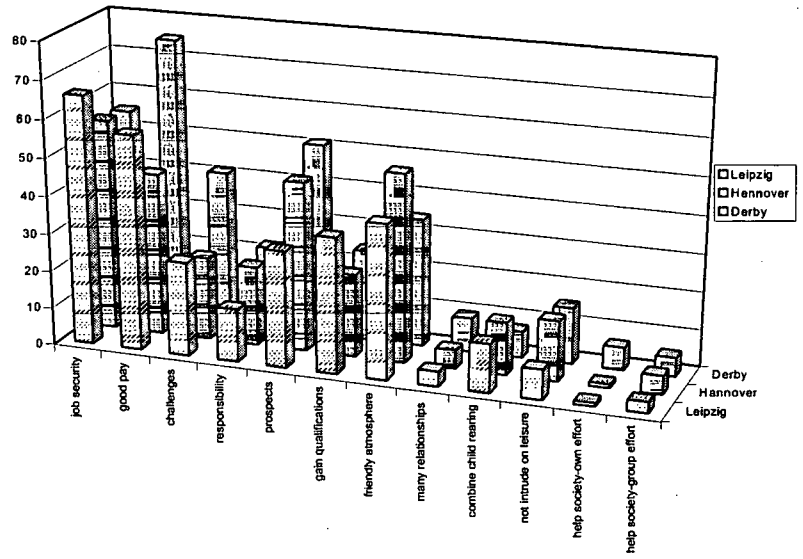


Table 6.3 Work values in unemployment context

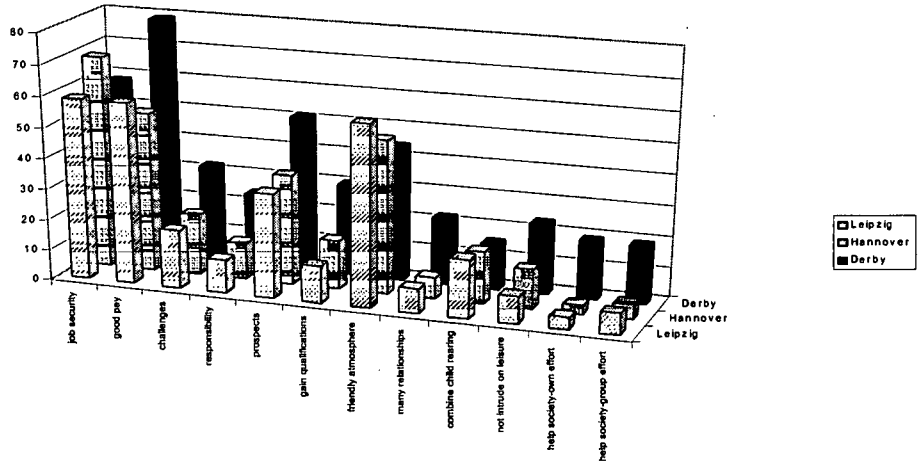
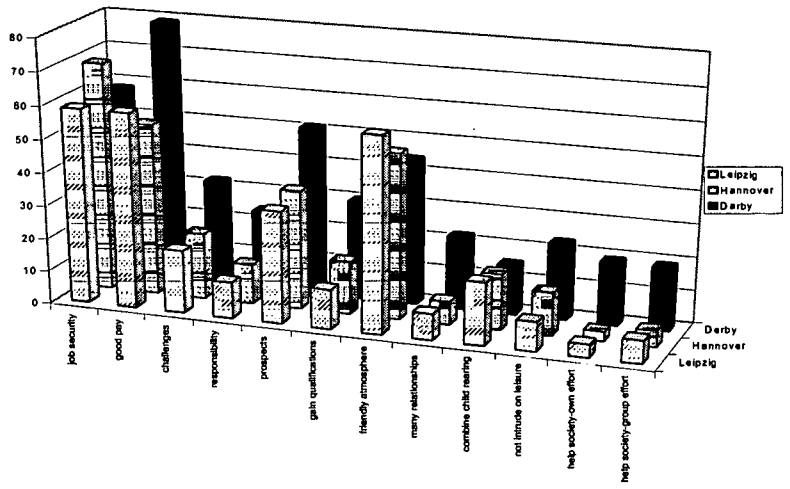


Table 6.3: Work values in unemployment context (%)



APPENDICES

APPENDIX ONE

Initial Checklist for Questionnaire

1. Structural Variables

Ascribed
- Gender
- Age
- Ethnicity
- Labour Market /
- Neighbourhood
- Social Class

Acquired
- Education and Training
- Qualifications

2. Indicators of Agency

- *Reflexivity*
  - self-reflexivity; ability to recognise strengths and weaknesses, e.g. courses/jobs; flexibility; valuing independence; facing uncertainty with relative ease.

- *Dependability and effectiveness*
  - self-regulatory ability in social settings
  - perseverance
  - initiative
  - responsibility

- *Self-confidence*
  - level of self-trust/self-doubt
  - feelings of security, especially in social settings
  - feelings of capability to deal with circumstances as they arise
  - social settings and others seen as resources

- *Collective efficacy*
  - political participation
  - belief in ability of groups to effect social change
  - group orientation`

3. Control Beliefs
- Internal and external constraints: perceptions of ability, effort, luck
- Decisions: who makes and influences these in different domains
- Control over options and choices
- Dependence and independence.

APPENDIX TWO:

TECHNICAL NOTES:

(A) REPRESENTATIVES OF SAMPLES

We acquired samples which were representative of respective populations *within setting within area*. This being the case it is valid to compare any of the nine samples with each other and to view the differences as being indicative of differences in the respective populations.

We have no reason to believe that any systematic bias will have been introduced, from the way the samples were drawn within areas within settings, and hence the expected values of statistics in these samples should be the same as their corresponding population values. We also have no reason to believe that the variance of these statistics in the samples will be systematically different from their variance in the corresponding populations, and hence we can estimate the population variance from the sample variance and hence the sampling distribution of any of these statistics under random sampling. Since extreme results are no more likely to arise from using our sampling strategy than from using simple random sampling, then a result which is found to be significant using standard statistical tests can (as usual) be interpreted as indicating that there are real differences in the respective populations. All differences referred to in the text were initially identified as significant at least at the $p<0.05$ level, as a basis for further inquiry and analysis using the full set of data sources.

Occasionally, the setting samples have been combined within area. This is valid for comparative purposes, where the aim is to identify relative response differences which may be attributed to the external features of the labour market or national differences, but the composite samples must not be taken as representative of the city populations.

(B) FACTOR ANALYSIS

For the factor analysis, we used the classical factor analytical model, in which variables in the analysis have both common variance (communality) and unique variance and in which the first estimate of communality is derived from the squared multiple correlation. In other words, we used principal axis factoring for the factor extraction. We then wanted to rotate these initial factors to give factors which could be easily labelled. To achieve this, we chose orthogonal rather than correlated factors (to make the respective factors distinct) and chose a method of rotation (VARIMAX) which minimises the number of variables having a high loading on a factor. Factor scales used in the analysis had reliabilities (alphas) ranging between 0.6 and 0.9. The comparisons of factor score means were used principally to identify areas for further analysis using the full set of data sources.

Tacit Skills and Work Inequalities

A UK Perspective on Tacit Forms of Key Competences, and Issues for Future Research

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Paper presented at the ECER Conference, Lille, September 2001

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'Workers soon to demand pay for what they have learned, no matter where they have learned it...learning that takes place away from the classroom, during leisure time, in the family or at work, is increasingly seen as a resource that needs to be more systema tically used. (CEDEFOP RELEASE,2001)

The call for wider recognition of skills gained through non-formal learning is only one facet of a debate centred on the nature of the so-called knowledge-based economy and the ways in which the 'knowledge' concerned is codified and used. The new debate has been fuelled by economists and labour market specialists, creating new possibilities for

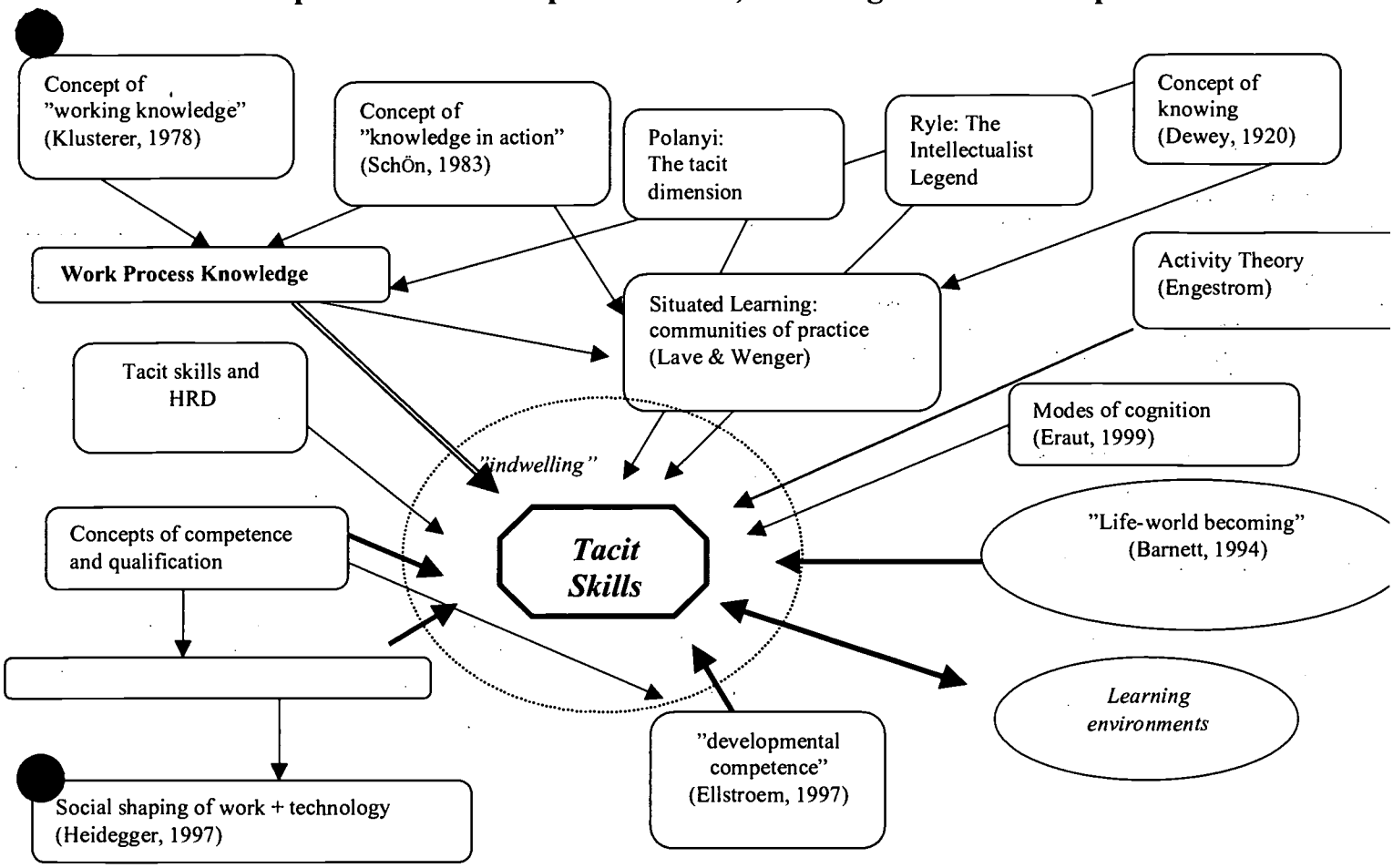
interdisciplinary endeavour with learning professionals and educational/ social researchers in trying to understand better what it is that actually constitutes the 'knowledge base' of the economy and the place of non- formal learning in this scenario.

Cowan, David and Foray (2000) in an issue of 'Industrial and Corporate Change' have identified the distinction between codified and tacit knowledge as being in need of redefinition in the 'knowledge-based economy'. They argue that it is a mistake to view any knowledge or skill as inherently tacit - nearly all knowledge, they say, is codifiable. From their economists' point of view the only real issue is whether the benefits of doing so outweigh the costs. Furthermore, they have pointed out that any acceptance of the view that knowledge can both be inherently tacit and important undermines the basis for standard micro- economic theory and any attempts to model human behaviour. Johnson and Lundvall (2001) take issue with them as fellow economists, showing how the concept of the 'knowledge-based economy' is poorly understood and raising fundamental issues which lie behind the drive to codify previously uncodified knowledge and skill for 'systematic use': how does 'codification' actually take place in relation to different types of knowledge? What are the driving forces which lie behind efforts to codify? What are the consequences of codification of different kinds of knowledge for economic development and for the distribution of wealth?

In this paper I argue that these questions are centrally important in considering questions of inequalities in skill recognition and access to learning at for and through the workplace. This is not an 'academic' discussion. The European proposals for Personal Skills Cards plac es this debate close to the heart of the political and economic agenda in the expanding European Community, and the proposals merit critical examination by us all.

For the purposes of the discussion which follows, non-formal learning embraces unplanned learning in work situations and in domains of activity outside the formal economy, but may also include planned and explicit approaches to learning carried out in any of these environments which are not recognised within the formal education and training system. It is taken that such non -formal learning has strong tacit dimensions. While explicit knowledge is easily codified and conveyed to others, tacit knowledge is experiential, subjective and personal, and substantially more difficult to convey.

Concepts and relationships: tacit skills, knowledge and the work process



Adapted from : Tacit-Key Project UK
Karen Evans and Bettina Hoffmann

The interest in its codification stems at least in part from a growing recognition that the tacit dimensions of knowledge are very important in performance of individuals, organisations, networks and possibly whole communities. Knowledge is taken in its widest definition as incorporating, at an individual level, knowing why, knowing that, knowing how and knowing who. At the organisational level, these four types of knowledge are found in shared information, shared views of the world, shared practices and shared networks. At the societal level we may talk about knowledge which is stored as personal knowledge, knowledge embedded in culture, knowledge stored in institutions and in networks. Know-how is of particular significance for this discussion, referring to the abilities *to do* things and involves complex linkages between skill formation and personal knowledge developed through experience.

I argue that that it is more helpful to regard all knowledge as having both tacit and explicit dimensions. When we can facilitate the communication of some of the tacit dimensions, these become explicit and therefore codifiable. Why should we want to do this?

This may be for the purpose of teaching someone else to do it (if we are a teacher or trainer), or communicating to others that we have skills and competences appropriate to a task, role or occupation (if we are job applicants), or identifying that a person or group has the ca pabilities we need for a job to be done (if we are employers or project leaders). In other words, the reasons for codification largely revolve around 'transfer'. It can be argued that, for those competences and forms of knowledge which have a high tacit dimension, transfer has to involve high levels of social interaction, demonstration and 'showing how' -manuals and written accounts are of little help. In the case of the job applicant, jobs which require a high level of skills which is not easily codified will often require a demonstration of skills and competence. In the case of a new entrant to a job and workplace, knowhow will involve both skills acquired previously and the underpinning knowledge which allows this skill to be operationalised in a new environment.

Beyond this a period of interaction within the social and occupational practices of the workplace will be needed for the tacit dimensions of knowhow to be adjusted to culture and environment of the new setting.

The ideas of individuals being abl e to transfer skills and competences between jobs in the interests of 'flexibility' fitted the 'modernisation' and deregulation agendas of the 80s and 90s in Britain, and key competences came to the fore as an instrument of 'lifelong learning' policy.
Treating these as completely codifiable leads to the claims at the beginning of this paper. If we can codify and compare key competences against 'objective' criteria, some of the assumptions commonly held about skill levels of different occupations might be c hallenged. (See Table 1). But research on 'work process knowledge' such as Boreham's (2000) finds that these skills derive much of their meaning from the context in which they are used. I argue that it may be more helpful to regard these skills as partly structural and partly 'referential' (ie referenced to context) recognising that people do take things with them into new jobs and occupations, but not in simple ways. This is one of the gaps in our knowledge. Much of the work on key competences has focuse d on extracting these from tasks and not in looking at the dynamics of the ways in which people carry knowledge and learning into new environments. The importance of this is now being recognised in the economic domain as well as in VET research and practice, with Johnson' and Lundval's latest paper calling for 'a major interdisciplinary effort' (2001). We know that the idea of simple skill transfer from one setting to another is very problematic - the fact that we can use common language to describe a skill group does not mean it is transferable intact. What we need to understand is the *processes* by which skills are 'transformed' from one setting into another. Naïve mappings of key skills from one environment into another are not a basis for occupational mobility. Even 'near' transfer into related activities is far from simple, leading to the recognition by activity theorists such as Engestrom (2000) that it is whole activity systems which count. For people with interrupted occupational biographies, this presents particular problems, particularly when they have spent extended periods away from the workplace. This fits with clear evidence that people with extended breaks from the workplace have no belief or confidence in their previous skills. Their feeling of being completely deskilled can be seen as a lived reality, not as lack of the personal attribute called 'confidence'.

The discussion which follows considers the origins of 'key competences' and formulations which have developed heuristically through micro-level research on the realities of how women and men recognise, use and develop their skills and the possibilities and contradictions they encounter in their occupational and learning biographies. These analyses are based on work carried out in the UK component of the European funded research TACIT-KEY (Evans, Hoffmann Saxby-Smith, UK Hendrich and Heidegger Germany)and further research being carried out within the UK in the ESRC Teaching and Learning Programme Research Network project (Evans, Sakamoto).
The final sections consider whether the European proposals for codification and communication of 'knowhow' via 'personal skills cards' (or other means) would decrease inequalities or increase them, and asks what the place of non-formal learning might be in the alternative scenarios for lifelong learning articulated by Coffield (2000): the technocratic or democratic visions of a 'Learning Society'.

'Key Competences' as carriers of tacit and explicit dimensions of knowledge and skill

The table below shows competences performed by work category , according to research reported in Gerber and Lankshear 2000.

Table 1: Mayer competencies: activities performed 'most of the time' by work category

	'Unskilled' (%)	Non-trade skilled (%)	Trade (%)	Professional (%)
Collecting, analysing and organising information	51	64	55	75
Expressing ideas and information	32	57	48	58

Planning and organising activities	34	55	52	83
Working with others and in teams	81	78	73	50
Using mathematical ideas and techniques	20	29	23	33
Solving problems	39	53	52	75
Using technology	49	42	44	58
Routine tasks	81	69	57	42
Novel situations	22	20.6	20.5	23

Source: Gerber R & Lankshear C (2000)

The research highlights the skill content of jobs cast as unskilled, a finding which is consistent with Rainbird's Future of Work research which led the team to replace the term 'low-skilled' with 'low -graded' work. The table concentrates on identifying forms of key competences.or key skills found in jobs. Key competences have gained in importance in all EU member states over the past decade. Formulations of key competences have come from different origins and are controversial in different ways. While the ideas behind key competences in the wider European understandings contain rather broad conceptions of skills and competences, competences in UK have to be understood comparatively in a rather narrow sense. In the European research a more holistic approach to competence was needed which would refer not only to occupational needs but to needs of the individuals with respect to enabling them to manage their personal biography as a whole. A new learning culture also had to be envisaged which would refer to competences which are generative of future individual and group performance rather than based on reductions of present individual work activities.

While there are official formulations of key competences in most countries, these are in very different stages of development and are controversial within their respective national contexts. For example, the focus in Germany on key competences came initially from labour market perspectives on the changing nature of work, and subsequently started to permeate discourses about the development of VET systems and practices in the search for ways to meet the requirements of enterprises for new qualifications in the workforce. Key competences are controversial in Germany because of fears that they undermine the 'Beruf' principle and occupational structures which underpin the German systems. In comparing competences and qualifications within Europe, different meanings of the term 'qualification' have to be understood. This is associated with certification in UK but is more widely understood in continental Europe as the whole set of attributes required for performance of an occupation.

The key competences debate in the UK can be contrasted with that in continental Europe in general and the specific features of the German debate. The origins in England dated from 1980s, where 'core skills' were explored as means of developing wider options for young people in the labour market, in response to high youth unemployment : how to prepare school leavers for jobs when youth labour market had dried up. 'A Basis for Choice' was an important report in early 1980s . This was then overtaken by an attempt to redefine the entire occupational field in terns of occupational competences, with the development of new formulations of core skills based on analysis of tasks common to jobs. These formulations, evaluated by Evans et al (1986) as part of a national development programme, were also controversial in many ways. Sociologically, their social control functions were identified and contested, while in the psychological domain they were seen as representing outdated behaviourism. In the Southern countries, key competences have entered the policy development arena more recently. In Portugal, the approach to key competences has been based on critical evaluation of European and Canadian approaches, leading to a drive for a lifelong system based on validation of formal and non-formal learning. In Greece, the traditionally weak links between education and labour market have meant that ide as about key competences and transfer of skills have gained attention only very recently. It may be that the importance of the informal and collective networks in facilitating work entry and occupational mobility in the Southern countries mean that the instrumental individual formulations of key competences of the Northern European countries will never be as important for changing employment opportunities in the Southern countries, but the ideas of key competences are nevertheless developing more strongly now in these societies

The UK formulations and use of key skills as a policy instrument has the longest history and some important lessons can be learnt from the problems encountered. There has been much resistance to 'official' versions of competence enshrined in VET policy in UK but competence is a value-laden word - in the worlds of policy and practice development it is difficult to say you are 'against' competence. The concept is also socially constructed, taking on different meanings in different contexts and is used to support particular ideological positions. Norris (1991) distinguished between behaviourist, generic and cognitive constructs of competence. Behavioural interpretations of competence are performance related. That is, they equate competence with the ability to perform a range of tasks to predetermined standards. Such approaches to competence are criticised for their narrowness, for confusing competence with performance and for ignoring the underlying capacities needed for change. These can be considered minimal interpretations of the concept. They do not imply any need for critical, reflective abilities. They are typified in Britain in the approaches to occupational competence which have shaped much of the discourse about post-school education and training in the 1990s. It has been argued elsewhere that this minimalist interpretation of competence serves the objectives of curriculum modernisers, who have put an emphasis on state intervention to achieve an enterprise economy, through a free market where access to knowledge and skill is 'democratised'.

The labour market has been redefined in terms of the rationale of competences, collected together as units, elements and range statements, the function being to 'measure the individual against the ideal worker which the skills matrix represents (p.230). The concept of competence thus becomes essentially technical, and omits the social meanings and social relations of work. The individualised, technical approach to competence 'de-skills individuals in terms of competences acquired within the informal localised networks of everyday life' (Giddens, 1991) and thus effectively disempowers them. In this sense it is best understood as part of the broader framework of regulation and control in modern societies. Others such as Issitt (1995) argue that approaches which equate competence with performance are essentially retrospective, reflecting and reinforcing the status quo and therefore reproducing structural inequalities. They have also been shown to be unworkable for higher levels of professional training (not popular with the academy).

Generic and cognitive constructs of competence, by contrast, emphasise broad clusters of abilities which are conceptually linked. They involve an underlying generative capacity reflected in general ability to co -ordinate resources necessary for successful adaptation (Norris, 1991). These may be seen as maximal interpretations. They imply the need for critical reflective learning and emphasis the development of self-efficacy and shared autonomy and attributes such as judgement. Reflective learning is considered essential if competence is to become future oriented, that is, able to develop the skills of the future (Brown, 1994, Wellington, 1987) rather than tied to the performance of narrowly specified tasks. In the international literature, the concept of capabilities has been recently elaborated in ways which further emphasise underlying abilities and attributes which are important the task performance. These formulations move beyond the surface features of common descriptors in task analysis, into a recognition of the importance of a degree of autonomy, emphasis on taking responsibility, being capable of undergoing and managing change in oneself and ones environment, having initiative and self relia nce. They tend to emphasise individual rather collective capability, although latest findings from European wide research into aspects of work process knowledge by Boreham et al (2000) are challenging some of the more individualistic formulations and leading into a new generation of work on collective competence and collective intelligence (Phil Brown, 2001)..

The current positions in partner countries (Germany, Portugal, Greece, UK) were reviewed at outset of our research into interrupted occupational and learning careers (TACITKEY). None of the current formulations of key competences was found to be adequate for the experiences we were trying to understand. In the English and German formulations, there is not sufficient attention to motivations, learning abilities nor the ability of people to manage their own biographies in line with personal interests and needs. The German 'action competence square' does not sufficiently recognise the non-formal dimensions of learning in its 'Beruf'- centred training and the English formulations are split between the general skills which now sit more easily in an educational paradigm and those embedded in work processes, in ways which have compromised their usefulness and have become conceptually confused (Unwin 2001). In Portuguese models, the approaches to recognition of 'know -how' are interesting and important, but not sufficiently advanced for our purposes here-their development in Portugal has centred to date on the traditional occupational areas.

The research needed to develop a model of key-competences which was more future oriented and generative in terms of peopie's personal and professional projects, given our emphasis on interrupted occupational biographies and learning careers (allowing for a wide range of life experiences and value orientations). Since all possibilities could not be explored simultaneously, the model which came to be known as the 'Starfish' model (or l'etoile de mer !) for ease of international communication, was developed initially on the basis of existing knowledge in the partner counties,

and developed heuristically in exploring the tacit dimensions of key competences in work re -entry. (See Figure 2 attached.)

The 'Starfish Model' (Figure 2) was thus initially developed from a colle ctive review of studies and used as a basis for heuristic investigation, to meet project criteria. The model was one we could test and develop empirically through our investigation of learning and occupational biographies. The model has emphasised broad clusters of abilities coming together in ways which generate growth, movement and future development. That is why the model is not a square or a list but an organism with abilities coming together at its centre. Our evaluation has shown that the model - as elaborated through the investigations in the four partner countries - has value in capturing some of the features which underlie successful change, adaptation and personal growth in ways which transcend national boundaries. It also has good fit with wider E uropean definitions of CEDEFOP in which key competences are *interlinked and interdependent human actions, involving self steering capacities, integrated social cognitive and technological dimensions together with underlying capacities for life -long learning.*

In identifying clusters in the 'starfish model', we identified five clusters of abilities which are important in negotiating changes of work and learning environments . These are *not* de-contextualised 'transferable skills' but abilities which have both structural and referential features-their structural features may be carried (tacitly) between environments but they have to be situated, underpinned by domain specific knowledge and developed through social interaction within the culture and context of the work environment. *Learning abilities* included the critical dimensions of perceptiveness, and learning from reflection on experience. *Social abilities include* empathy and promoting feelings of efficacy in others. The *methodological cluster* included being able to handle multiple tasks and demands in complex and sometimes contradictory environments. Competences related to values and attitudes can be argued to be attributes rather then competences, but the standard competences of honesty and reliability often identified by employers are overlaid with responsibility, resilience, determination and awareness of rights as well as responsibilities.

Our early research confirmed that naïve mapping of key skills between environments does not work. It has a lso confirmed that the clusters generated from learner perspectives also capture employer and trainer perspectives at the level of the generic 'label'. Employer perspectives, however, ascribe and recognise the key competences at lower levels then the learners, a phenomenon also observed in the Brown and Keep COST review of VET research (1999), while trainers are more likely to recognise key competences at higher levels than employers, but also more narrowly than learners. Attributes of creativity, sensitivity, emotional intelligence often go unrecognised or are taken for granted.

Case studies of males and females enrolling in Continuing Vocational Training (CVT) programmes aimed at changes of direction are showing that males and females biographies cluster in the ways they deploy the abilities gained through experience. There are also commonalities of experience associated with gender and class which transcend national boundaries. In our cases, positive experiences were shown to be associated with awareness of ownership of the key competences identified.-the 'positive' experience of overcoming setbacks is particularly powerful in these respects. One of the most interested findings is that males and females with long term occupational breaks view and deploy their skills differently. Females often regard their 'family' skills as highly developed but unrecognised in all areas except 'caring' or other areas of 'women's work', so disregard them in their search for work re -entry in other fields, concentrating instead on new or updated explicit skills. But they do take the structural aspects of these wider skills with them, and point to their importance when applied (tacitly or explicitly) in their new work situations. In practice, employers ascribe 'female skills' to mature women re -entering the labour market, but at a level and in a way which advantages them only in relation to other vulnerable job -seekers , 'womens' work' and easily exploitable positions. Males ignore their skills gained outside the econ omic sphere, no advantages are derived from them and they are regarded as totally separate from the economic domain-explicit new skills are sought for work re- entry and no advantage is perceived to stem from those informally gained in the family/domestic domain. More generally, those who are able to operate as 'labour force entrepreneurs' moving frequently between jobs in order to improve their position have forms of knowhow which appear to have currency in the labour market despite the fact that they cannot be easily codified. (See Figure 1) .

Further analysis of these phenomena (Evans and Sakamoto) is indicating how important 'tacit supplementation' is in the ways in which employers ascribe competences to individuals and delineate requirements for jobs.
Leplat (1990) showed how tacit skills appear important in at least three places: the gap between skills officially required for jobs , and (1) skills actually required (2) the skills actually implemented and (3) between the skills

required by preliminary training and the skills actually implemented. Our findings are showing how the processes by which key competences are ascribed to people (often along gendered or class/disability -based lines) align with the tacit (as opposed to official) requirements of occupations, and thereby reinforce workplace inequalities. For example, attributes of 'mature and reliable' often ascribed by employers to women returners have a tacit supplement of 'compliant and undemanding', tacitly seen as equipping them' better' than younger people or males for low grade and low paid positions with few development opportunities.. These processes of tacit supplementation of key competences and jobs continue to reinforce inequalities in the workforce and systematic undervaluing and underdevelopment of the skills of segments of the population. (Equal Opportunities Commission, 2000 and Ashton 2000)

So, what would happen if a 'personal skills card' or alternative means of 'making learning visible' were to be introduced? Would this increase democratic access to knowledge, by making it explicit and distributing and recognising it more widely? Or would the existence of unequal power relations mean the control of more and more domains of knowledge by the powerful, and the disappearance of the 'protective belt' of tacit knowledge formed in the informal discourses of everyday life, through which individuals and groups can exercise their rights and resist exploitation.

The possibilities can usefully be explored in the context of Coffield's two scenarios for the future of lifelong learning - the technocratic and the democratic versions of the learning society. The technocratic model envisages continuation of the present policy lines, emphasising individuals' responsibility to maximise their competitive position within markets. The democratic scenario emphasises the individual, social and political rights which are minimum conditions in a democracy.

In the *technocratic* model, short term gains might be made in providing a basis for more equi table rewards for those whose skills currently go under-recognised and underpaid, but continuation of current policies would mean that the onus would continue to fall on individuals to negotiate and sell their skills in marketplaces in which the strong dominate. Longer term, will those same markets operate in ways which reward individual investment (by people acting as private agents)in securing expanded forms of know-how as the new 'knowledge currency'? . Does this fuel still further the processes of polarisation as the advantaged are able to expand their ownership of all four kinds of economically valuable knowledge through engagement in knowledge -rich and experience-rich environments and 'knowwho' networks which are denied to those with fewer resource s and less social capital.? The *democratic* scenario would reassert the four domains of knowledge as public goods to which anyone should have access, through the twin principles of education provided as a public and collective responsibility and social audit of enterprises and their policies in relation to skills development and relationships with their communities. It would also reassert the wider importance of learning in, through and for all domains of life. It would prioritise the inclusion of those who are currently the 'knowledge poor', and its emphasis in 'making learning visible', would be to strengthen the self assurance of those who have skills and knowledge which presently are unrecognised or exploited.

The so-called knowledge based economy raises fundamental questions about what counts as knowledge, who owns, manages and controls it. This is reflected in the contested nature of the Recognition of |Prior (Experiential)Learning . Two projects involving documentation of the experiences of workers in the mining and motor industries, reported by Evans N (2000) , showed that these became highly problematic because management and unions had entered the process with completely different agendas, with management wanting a skills audit while the union sa w the process as 'part of a move towards improved job grading and wages for workers' in the first instance and improved access to further education in the second. In both cases, neither improvement in wages not improved educational access was forthcoming, with consequent deterioration in the industrial relations. This led the compiler of 'Experiential Learning around the World (Norman Evans) to comment towards the end of the collection that ...'what has become clear is that RPL cannot be separated from the broader epistemological, political and ethical issues.' This is obviously so. For the future, the ESRC network project on this theme (Evans and Sakamoto 2001) and the wider programme of which it is part, is aiming for a better understanding of adult learning processes within these frameworks.

Johnson and Lundvall (2000) have argued, a much more satisfactory mapping of the knowledge base is needed, and that such a mapping has to capture the competencies and competence building of individuals, organisations and regions , 'in order to understand what is learnt, how and by whom , in different contexts and to construct better indicators of different kinds of knowledge.' (p18)

By focussing on competence building in interrupted occupational biographies and the implications of accrediting non-formal learning, this paper has aimed to bring questions of social inequality closer to the centre of the debate.

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FIGURE 1:CASE STUDIES OF PARTICIPANTS IN CVT – JOB CHANGE PROGRAMMES , UK
– 5 clusters of key competences according to....

Advancement oriented, work centred attitude

- predominantly males, 'labour force entrepreneur' frequent job moves geared to advancement; high awareness of key competencies & know- how.

Precarious occupational biography in low graded jobs

- predominantly males; awareness of social competencies for adapting to new work si tuations; little confidence in ability to draw on other experiences or skills in new work situations, or recognition of their relevance.

Return to general job market after occupational break for personal (family reasons)

- predominantly stability- oriented females; awareness of key competencies gained outside work but knowledge that these are seen as equipping for helping/caring occupations or low graded jobs ('women's work'!)
- for males, awareness of key competencies but these are seen as irrelevant for work re-entry: 'in a different dimension'!

Aiming for self employment

- both males and females; high awareness of key competencies, used with confidence to pursue chosen business opportunities – does not rely on accreditation by others

Resuming high skilled professional career after career break

- focus on regaining lost technical skills and updating them – importance of key competencies gained outside work. Valued retrospectively, but irrelevant to work re-entry process.

FIGURE 2: **A BIOGRAPHICAL APPROACH:**
KEY COMPETENCES IDENTIFIED THROUGH BIOGRAPHICAL ANALYSIS OF SIGNIFICANT NON FORMAL LEARNING EXPERIENCES AND JOB /ROLE CHANGE (Starfish Model)

Response to work-content-related demands
- practical aspects of operating in modern) work environments

- Willingness to carry out variety of different duties
- up-dating of skills and knowledge in relation to roles

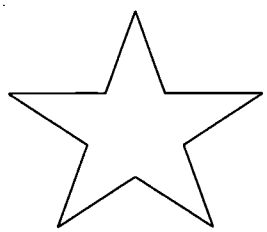
Content related and practical competencies

Responsibility,
Tolerance
Reliability
Determination
Resilience
Principled

Competencies related to attitudes and values

Adaptability to different learning contexts
perceptiveness-openness to learning experiences
ability to improvise
Perceptiveness

Learning competencies



Social and interpersonal competencies

Methodological competencies

Organisational ability
-initiative/ability to make decisions fast in critical situations
-crisis, time and budget management
-networking
-planning and problem solving
-discipline;-methodicality
-communication ,means and modes
-ability to handle multiple tasks and demands

demanstasks/demandss and demans

communication
listening
patience, sensitivity
deal effectively with routine/everyday life
social events
creativity
ability to encourage others
awareness of others' viewpoints and circumstances

Does Training Have Any History?

The enduring influence of behaviourism in Britain, 1940 – 1966

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Introduction

For many years, the most powerful underpinning theory of vocational training was provided by behaviourism. Operationalised for educational and training purposes as 'programmed instruction' or 'programmed learning', behaviourism provided trainers with a set of guiding principles that continued to dominate the profession until well into the 1970s. It became particularly significant in respect of instructor training. A memorandum issued in 1966 by the Central Training Council, a statutory body responsible to the Ministry of Labour, stated that:

> Many of the principles of programmed instruction are not new. They apply equally to any good teaching method and have been used by good instructors and training officers for many years [1].

Very similar words featured six years later in a standard British introductory text for further education college lecturers:

> The principles of programmed learning are not new. They apply to any good teaching me thod and have long been used by good teachers (Russell 1972, 28).

Some commentators lamented the adoption in some teacher training institutions of a particularly 'rigid behaviouristic psychology', but even they might advocate a more sophisticated version of the behaviourist model rather than its abandonment (Singleton 1968, 19-20). Its general influence on both broader beliefs about human learning and the specific modalities of training practice appeared to be pervasive and well established.

By the 1990s, though, all this had changed. Behaviourism was widely criticised by both academics and the wider profession. An authoritative British text, published by the professional association of human resource managers, spoke of psychology in the early decades of the twentieth century as "a young academic discipline", whose

influence on education and training was summarised as "mechanistic structures, bureaucracy, instruction" revolving around a four-stage approach: "Tell ▸ Show ▸ Do ▸ Review" (Reid and Barrington 1999, 14-15). Such repetitive and hierarchical routines, involving a handful of instructors, are judged to create inbuilt rigidities and thus can have no part to play in a world where "Everything has speeded up, including the pace of change itself" (Reid and Barrington 1999, 13).

Nor has behaviourism fared any better among the scholarly community. Post- structuralist accounts depict behaviourism as

> Only another form of reification in which human 'problems' are projected onto the isolated, decontextualised human frame and detached from the meaningful contexts in which they occur. Thus, people become bodies who behave, and their problems are seen to re st in their behaviour rather than in their social condition (Prior 1989, 145).

Contemporary academic writers on vocational training see behaviourism as so flawed as to require little further explanation or analysis beyond denunciation. Terry Hyland, one of Britain's most influential scholars, has summarised the criticisms as follows:

> ... there is a large body of work within philosophy of education which points to the logical inconsistencies in behaviourist theory, the failure to distinguish adequately between voluntary and involuntary action, and the generally impoverished conception of humanist agency (Hyland 1994, 51).

For Hyland, the reductionist and 'utilitarian' principles of behaviourism are associated with notions of technocratic rule and market dominance. The apparent 'Skinnerian technicist thrust' of the United Kingdom's redesigned national vocational qualifications structure in the mid- 1980s was, for Hyland, a matter of profound regret (Hyland 1994, 53). Although Hyland's wider analysis of vocational qualifications has been widely debated, his account of behaviourism appears non-controversial.

The very idea of a historical account of behaviourism and its influence on training might therefore appear perverse. This paper seeks to explore the context within which behaviourist ideas came to dominate the vocational training profession. It takes the UK as its main source of evidence, partly for reasons of convenience and partly because it provides an example of how a theory can be transferred from its original setting. During the middle years of the last century, I argue that behaviourism was adopted for three main reasons. First, it provided an attractive theory of training, at a time when the role of specialist trainer was beginning to emerge, which then facilitated the appearance of a 'coalition of interest' between policy makers, academics and practitioners. Second, it broadly corresponded to the requirements of Fordist or Taylorist regulatory regimes within industry. And third, it thrived because of a number of favourable contingent factors (particularly the impact of wartime conditions on the labour market).

This episode also illustrates a wider gap in the literature. Vocational training has no history. Or, to be more precise, its history is always a history of failure. New practices and theories are always promoted at the expense of their immediate predecessors. Now, it is certainly no part of my purpose to reinstate behaviourism as an

[1] Central Training Council: The use of programmed instruction in industrial training, *Ministry of Labour Gazette*, 74, 2, February 1966, 67.

underpinning theory for vocational training today. However, it is intriguing that the rejection of behaviourism is not itself accompanied by any attempt to understand the conditions of its dominance. More generally, it seems that the field of training and human resource development has at best a weakly developed sense of its own past – not simply of the 'longue durée' but also the 'courtes durées' of skills acquisition and transmission under developed capitalism.

The development of programmed instruction

Behaviourism has its origins in North American tradition of experimental psychology, and particularly the doctoral research of E. L. Thorndike into animal behaviour. Thorndike used his observations of hungry cats when placed in 'puzzle boxes' as the basis for his theory of instrumental learning, which he formalised as the 'Law of Effect'. Thorndike argued that his experiments showed that animals learn solely by trial and error, the results of which enabled them to make connections between stimuli and responses. Learning is more lasting when accompanied (or "reinforced") by satisfaction than when it is accompanied by discomfort. Thorndike also concluded that experimental science was the only way to understand learning.

As a teacher at Columbia Teacher's College, Thorndike saw ready application of his stimulus-response mod el to education and training. His work also followed important parallels to Pavlov's earlier animal experiments. Indeed, it has been argued that Pavlov's work was taken up by Victor de la Vos, principal of the Imperial Technical Institute in Moscow, who pr esented his ideas on task analysis as a basis for curriculum design at the Philadelphia Exposition in the 1870s [2]. This suggests that Thorndike was by no means al one in searching for a systematic application of experimental psychology to teaching and training. Demand for new approaches to training and upskilling was limited in interwar America; labour supply was plentiful, with limited recruitment into craft occupations, and the expansion of Fordist production and services brought a tendency towards downskilling across much of the USA at the expense of the established skilled trades. Sydney Pressey's early designs of programmed learning, which led to the invention of the first keyboard -operated teaching machines (more accurately described as testing machines) were designed to break learning programmes down into a series of sequenced tasks; the testing machine was supposed to ensure that students only proceeded to new material when they had correctly mastered the previous steps. While Pressey failed in his attempts to market his devices during the 1930s, they had demonstrated the feasibility of what came to be known during the Second World War as programmed instruction.

Subsequent theoretical developments were associated largely with the work of Skinner. Skinner's use of the term 'operant conditioning' (which he distinguished from Pavlov's studies of 'respondent conditioning') emphasised the importance of reinforcement directly following a successful action. Subsequently, the behaviourist community debated the efficacy of linear programming as advocated by Skinner (a routine sequence of small steps structured in a linear manner and with a conventional single choice que stions) as against branched programmes, based on somewhat larger steps followed by multiple choice answers, so that the learner is directed

[2] David Wilson, University of Toronto, personal correspondence, 4 January and 6 January 1996.

in different directions depending on the answer given. By this time, however, academic psychology had come to provide the dominant paradigm within which training practice operated, such as it was.

Programmed learning in Britain

One British educational psychologist, who started lecturing in the early 1960s, described his neighbours in the Psychology Department as follows:

> The dominance of behaviourism was absolute. They weren't arguing about whether it was right or it was wrong, but about whether it should be branching or should be linear in terms of how they approached the programmed instruction (Interview, 27 June 2001).

But if behaviourism was the dominant paradigm in academic psychology, by this time it was also a powerful force within the fields of both policy and practice. By the 1970s, the principles of programmed learning were widely accepted.

The principles of programmed instruction initially came to Britain during the Second World War. As in the USA, the labour market was constrained by the demands of the armed forces, and the shortages of skilled workers in key industries were protracted and profound. As Re g Revans put it in a plan prepared for the colliery owners' association,

> The Industry is just now moving out of the stage when the new entrant was admitted to the secrets of his craft through his father's personal introduction and supervision (Revans 1945, 29).

Given coal's history of class conflict, the chance of eroding labour' s control over the supply of skills was too good to pass up. Coal had never entirely shed its pre -industrial heritage, and technological change and organisational restructuring had therefore achieved what one American historian describes as "only incremental steps toward management control over the labor process" (Dix 1979, 169). For the Ministry, however, there was a more profound and general problem. Across industry, there was a widespread shortage of capable supervisors who could ensure maximum productivity at a time of profound national crisis – a crisis which, in the event, continued into peacetime as government and industry struggled to adjust to new economic imperatives with extremely limited physical resources.

The Ministry ordered a review of its training policy in 1941. Following a decision in 1939 to terminate all training activities that were not of direct value to the war effort, the Ministry had turned its training centres over to the production of semi-skilled and skilled engineers, as well as for related trades, then buying training courses in technical colleges as the numbers being trained expanded (including canteen cooks and lorry drivers). Initially the Ministry tackled the shortage of line managers by providing funds for technical colleges to deliver lecture series on foremanship; over 12,000 workers had attended these courses by the end of the War (Ministry of Labour and National Service 1947, 106). The 1941 review was designed to speed up this process, and identity "more elastic systems of training and . . . modifications in the length of training courses", as well as considering how to obtain more instructional staff (Ministry of Labour and National Service 1947, 100-1). It concluded that speed and effectiveness would best be served by training labour in the workplace, "particularly where up-grading

of skilled workers or de-skilling of processes was involved" (Ministry of Labour and National Service 1947, 107). Having ensured that this view was accepted by both sides of industry, the Ministry established a Training Within Industry Advisory Service, and published a handbook.

Separately, following a secondment by a senior civil servant to the US Defense Department, the Ministry decided to develop a scheme for training industrial supervisors using the principles of programmed instruction. The programme, introduced in September 1944 included a series of courses for supervisors, known as the Training Within Industry (TWI) programme, in the fields of Job Instruction (training in the principles of instruction), Job Relations (or personnel management) and Job Methods (productivity improvement) [3]. Subsequently the scheme was extended in the immediate post- war period.

TWI, and Job Instruction in particular, was particularly effective in the growth sectors of manufacturing. Protected largely from external competition, and producing for a growing domestic market as well as for export, these industries experienced significant labour shortages before the end of the 1940s. A Miss B M Marvell, Works Trainer for the food producer Peak Frean, reported that two thirds of the company's staff were women employed in repetitive jobs; labour turnover was high, and workers were frequently transferred to relieve bottlenecks caused by shipping schedules. Before the war, skills training had been carried out by asking experienced workers to demonstrate the job. The firm had put all managers and supervisors through TWI, had "broken down" all tasks involved in repetitive work, and introduced a new grade of trainer, partly to pass on skills to newcomers and partly as a preparation ground for future supervisors [4].

Initially, the Ministry had anticipated a broadly balanced offer in TWI. In the event, the most successful element proved to be the introduction to training techniques. By the winter of 1946, for instance, an industry association reported that the mining conglomerate Newton Chambers had trained some 620 supervisors in Job Instruction, while 327 had taken the Job Relations course and 50 Job Methods. In each company, Job Instruction was the largest single course; it was taken by 272 supervisors at Rowntree, 379 at Hoover and 700 at Standard Telephones [5]. A survey of textile manufacturers in 1950 showed that 9% had introduced Job Instruction training, with a number opening new 'training schools' for new employees [6]

Programmed instruction continued to enjoy the support of the Ministry up to and beyond the introduction of the 1964 Industrial Training Act. The Central Training Council (CTC), created under the Act and funded by the Ministry of Labour, issued a memorandum in 1966 on the use of programmed instruction in industrial training. While it expressed the belief that "for practical purposes programmed instruction has passed beyond the research stage to that of development and use", it accepted a need for further investigation in respect of older adults, and

[3] Ministry of Labour and National Service, *Training Within Industry for Supervisors*, 1946, Federation of British Industry Archive, Modern Records Centre (MRC) 200/F/3/T2/2/16.
[4] *TWI Topics*, 1, March 1946.
[5] Industrial Manufacturers' Research Association, Distribution by Managers of TWI, 12 November 1946, Ministry of Labour and National Service, *Training Within Industry for Supervisors*, 1946, Federation of British Industry Archive, MRC 200/F/3/T2/2/16.
[6] Training Within Industry for Supervisors – Follow Up, TWI Association North-West Region, 1950, Federation of British Industry Archive, MRC 200/F/3/T2/2/16.

exploration of new methods including the "development of com puterised and semi-automated systems of group instruction and in the use of audio and video tape techniques". The Council called on the new sector-based training boards to be "in the vanguard of this advance" [7]. Even before the CTC could exert much influence, the author of one national survey concluded that "programmed learning has not only been accepted as a powerful industry training method, but its use will continue to grow, both in quantity and in variety of applications" (Romiszowski 1967, 215).

The influence and impact of programmed instruction

Why did programmed instruction prove so popular? The main reason for its appeal seems to have been its compatibility with wider approaches to industrial management. One shipbuilding manager talked in 1947 of training as part of the broad strategy required "for management to organize and control work to a very marked degree", adopting a "rational form of organization" that was "based on logic and facts" (Hodges 1947). The principles of scientific management had already become widely disseminated by this period, and their impact grew over the following two decades, not least a s a consequence of the widespread professionalisation of a number of different specialist management functions, including the development of a distinctive personnel function. In this respect, the broad appeal of TWI and of programmed instruction more generally lay in its claim to scientific status. It also had a more specific appeal to managers, in that it appeared to facilitate micro- level control over the labour process. Finally, it seemed to offer a cost -effective means of providing mass training.

Programmed instruction was justified as a series of coherent practices rooted firmly in science. It was based on the clear specification of behavioural objectives, which were identified through analysis of the separate tasks involved in a particular job. Rollin Glaser provided a convenient summary:

> The construction of programmed instructional materials takes very seriously the importance of the behavioural specification of training objectives and the significance of such learning variables as task guidance, immediate reinforcement, and active learning (Glaser 1966, 188).

Behaviourism similarly underpinned one of the most influential versions of modern management, management by objectives. In a speech on programmed learning at the annual conference of personnel officers in 1967, the superintendent of the British Empire Airways staff college was reported as describing the way that "benefits accrue" from the rigorous and systematic approach used in programmed learning, "as with management by objectives" in the wider organisational domain, before concluding that

> Programming has given rise to a new technological approach to training, and it is the technology rather than the technique which will be important [8].

In its advice to the newly created industry training boards in Britain, the Central Training Council stated that programmed instruction rested on "objective" knowledge, bringing a " new element of precision . . . from the analysis of training need to the assessment of the effectiveness (validation) of the training" [9].

[7] Central Training Council: the use of programmed instruction in industrial design, *Ministry of Labour gazette*, 74, 2, February 1966, 67.

The wider reception of programmed instruction benefited enormously from a general public acceptance of psychologists' claims that theirs was a scientific discipline. As Glaser wrote in the mid-sixties, "Essentially, programmed instruction represents an attempt to organise the process of teaching according to what we know about human learning" (Glaser 1966, 188). Apart from anything else, one consequence of this claim was that programmed instruction eventually won acceptance among a significant number of teachers in schools and universities. One important facet of this process, and a marker of future changes, was a shift in language. Among educationists, the preferred terminology was programmed learning. Early discussions about the crea tion of a national association for programmed instruction reflected this development, and the Association for Programmed Learning (APL) was duly founded in 1966. By 1968, the APL reported growing numbers of members in secondary schools [10]. In a self-confessedly incomplete survey of higher education, it was reported that programmed learning was used in some areas within twenty-nine universities covering all four nations in the UK (Cavanagh and Jones 1968).

Second, programmed instruction appeared to offer an increase in managerial control. Scientific management was not solely concerned with the subordination of labour in the abstract, but also with the subordination of the transmission of knowledge and skills. union. In this context, the idea of management by objectives appeared highly congruent with the principles of programmed instruction. Interestingly, this feature meant that programmed instruction was of considerable interest to the Communist nations; the Czech government, for example, encouraged the Comenius Institute in Prague to establish a Laboratory for Programmed Learning Research (Kalic 1970). As one American commentator wrote, "programing has redirected the thinking of trainers and educators to the basic purpose of training: to change behavior" (Schuttenberg 1965, 49).

In Britain, the question of labour subordination was particularly pressing given a context of rapid increases in the numbers and density of trade union membership (particular ly but not only in the nationalised industries) and the capacity of union members in industries such as vehicle manufacturing, coal and the docks to resort to unofficial strike action in the pursuit of grievances. Programmed instruction was hardly a centra l plank in managerial strategies, but it did represent a prospect of opening up labour supply channels, as well as increasing the level of control at the micro-level of the labour process, if not at the macro- level of the plant or enterprise as a whole.

Managers could draw on a supply of specialised teaching materials, designed by experts to be used by training officers on the ground. Initially, the materials were usually simple in nature, such as handbooks and films, which taught material in a planned sequence, with opportunities for immediate feedback. By the 1950s, the first teaching machines were going onto the market, but most trainers continued for a decade to focus their attention on the development of print- based programmes such as workbooks and tex ts. By the late 1960s, however, electronic systems were being applied in the design of such instruments as the "Edison Responsive

[8] Personnel Services Conference, *Personnel Magazine* , April 1967, 13.
[9] Central Training Council: the use of programmed instruction in industrial training, *Ministry of Labour Gazette* , 74, 2, February 1966, 67.
[10] Editorial, *Programmed Learning* , 4, 4, October 1967, 260.

Environment", also known as "the talking typewriter", which used a series of voice messages recorded on magnetic tracks on the back of a program card (Hill 1970). Such developments were perhaps what gave programmed instruction a reputation in some circles for being "rather far-out" (Page 1967, 32) and "full of gimmicks" (Routh 1967, 22). More typical was the decision by London Tr ansport to replace its classroom -based approach to training for new recruits by programmed instruction. Administered through training centres, this was a "simple linear programme . . . combined in booklet form with one frame per page", timed for one hour only, and involving mainly a series of questions and answers with very limited text (Neale, Nye and Belbin 1968). By the late sixties the development of audio-visual aids, including computer based materials, was much an accepted part of the mainstream, a change marked by the APL's decision to rename its journal *Programmed Learning and Educational Technology*, a decision explained by its editor as "reflecting a steady trend towards a wider outlook" [11]. As Eraut has said, the period between the mid- fifties and the mid-sixties might be seen as a "pioneering decade", followed by "a more mature, reflective and practical range of approaches" (Eraut 1985, 4098).

This feature of programmed instruction also made it attractive to industry associations. Following the passage of the 1964 Act, the newly-created training boards themselves often promoted the use of programmed instruction [12]. In the case of the Hosiery and Allied Trades Research Association (HATRA), programmed instruction had enabled training "to be extended to member firms scattered across the country as far afield as the Shetland Islands and Devon" (Routh 1967, 22). HATRA found it relatively easy to pe rsuade member firms to hire its Grundytutor teaching machines (eight were even sold off), programmed to train workers in basic fabric technology.

Third, programmed instruction appeared to be highly cost effective. Its principles could be taught relatively quickly, and could be summarised briefly as a manageable set of easily memorised precepts. The overwhelming majority of companies using programmed learning in the mid- sixties relied solely on commercially available programs (Romiszowski 1967, 214). This was particularly useful when, as in the immediate aftermath of the War and then after the 1964 Industrial Training Act, UK industry experienced a considerable shortage of skilled trainers. In coal, for example, Reg Revans described a "serious dearth of competent instructors" who might help the owners displace the father -son nexus of labour recruitment and induction (Revans 1945, 29). In the short term, the post-war shortage was met by recruiting ex- servicemen and women who had had some experience of training in the armed forces [13]. TWI offered a fast track form of training, partly funded by government, that helped provide industry with a cadre of skilled trainers, as well as offering the attractive prospect of training line supervisors to understand the basic principles of programmed instruction. In 1949, BACIE considered plans for offering its own training courses for training officers, designing a one -week residential programme that included discussion of TWI and an introduction to the psychology of learning [14].

Two decades later, the situation was more difficult. Rather than drawing on demobilised service staff, industry was forced to recruit internally. David O'Brien, personnel manager of Brown and Polson, a large Manchester

[11] Editorial, *Programmed Learning*, 4, 1, February 1967, 1
[12] *Ministry of Labour Gazette*, 74, 9, June 1966, 285.
[13] BACIE – Members' Confidential Memoranda, February 1948. MRC 200/F/3/T1/205
[14] Ronald Ogden to Dr Bard, 21 June 1949, BACIE file, MRC 200/F/3/T1/205

chemicals concern, adopted the old TWI approach and trained the firm's supervisors in the principles of programmed instruction, so that they could in turn train production workers. Unsurprisingly, the proposal "was not greeted with much enthusiasm" among supervisors, while the operators "regarded the project with suspicion"; though attitudes apparently changed when the programme was adapted a nd shortened, the firm decided that it was "above their heads", and tried to simply the programme even further (Routh 1967, 23). For the Central Training Council, programmed instruction had the merit of allowing "the services of a good instructor" to be "m ade available to a wide audience through his programmes" [15]. Similarly, the development of training programmes allowed companies to bypass the costs of employing trainers. Patricia Callender, author of a standard textbook on programmed learning, described teaching machines as

> very useful in industrial situations where training can be given to employees, working on their own for short periods, without necessitating special arrangements or having to leave the premises for training (Callender 1969, 11).

Combined with economies of scale, though, programmed learning also allowed for varying individual learning patterns (Schuttenberg 1965, 48). In fact, the ideas of 'mass individualisation', so often associated with post-Fordist regimes, were applied to programmed instruction during the 1960s.

In general, it seems that the decision to use programmed instruction was far more common in large organisations. It therefore went hand in hand with the development of a specialised personnel function within management, and perhaps even a distinctive training unit of some kind. This may not always have been the case. In hosiery, for example, Ruth Routh described the purchasers of HATRA's materials as "mostly small firms, without a sophisticated training system, let alone a training officer" (Routh 1967, 23). However, a national survey of usage in England in 1966 found that around one half of firms with over 5,000 employees claimed to have used programmed learning during the year, but only one fifth of those with 1,000 to 5,000 employees; among small and medium firms (fewer than 500), the proportion fell to 6.1% (Romiszowski 1967, 211).

The growth of the training profession

Programmed learning rose to prominence at the same time as training became a distinctive profession, albeit still very much a marginal one. On the outbreak of the Second World War, virtually all training in Britain wa s undertaken by experienced workers sharing their knowledge and skills with less experienced workers. In the craft trades, this process assumed the highly regulated (and gendered) form of apprenticeship; elsewhere, the training relationship was considerable less formal. Specialist training personnel were rare; the majority were employed in government centres, training such groups as the unemployed (Field 1992). Although a separate group of instructors emerged in the private sector during the 1940s and 1950s, its role was limited. According to one civil servant:

[15] Central Training Council: the use of programmed instruction in industrial training, *Ministry of Labour Gazette*, 74, 2, February 1966, 67

> Many instructors are chosen for their craft skill, some are chosen because they are getting too old for production work, but few are chosen for their ability to instruct [16].

Nor were employers likely to treat the instructors as specialised trainers. When BACIE developed a ten- week course for training officers at Garnett College, it met with what one specialist described as an "insultingly poor response" from industry, while the second course was cancelled through lack of interest (Page 1967, 69). The Donovan commission on industrial relations noted the rigidity of the apprenticeship system, and urged government to consider measures to promote a more systematic approach to training in industry.

The 1964 Industrial Training Act transformed the situation. By providing a statutory framework for the regulation and funding of training, the Act led to a dramatic growth in the numbers of specialised training staff, and also to a change in their status. In 1967, for example, it was reported in the trade press that the new statutory requirements had to interest in "the training and qualifications as well as the recruitment of training officers", while several of the newly created Training Boards were recruiting university graduates to their training advisory services [17]. The Knitting, Lace and Net Industry Training Board, for example, designed a three-week train ing course aimed at teaching selected "operatives the theoretical and practical techniques involved in modern training methods, based largely on skills analysis" [18]. This also coincided with a noticeabl e shift in language and organisation; rather than 'instructors', the staff were increasingly known as 'training officers'. The Act also led to a change in the quality of training staff, at least if their degree of preparation is anything to go by. For example, only after the passage of the 1964 Industrial Training Act did BACIE find a regular constituency of training officers for its courses, as the newly-created training boards opened up a career route in the profession, and the Ministry of Labour financed the courses (Page 1967, 91). A year after the Act came into force, the Ministry was sponsoring eight and four week sandwich courses at eight venues in England and Wales [19] .

In this context, behaviourist approaches to training provided a clear intellectual underpinning for the practice of this new profession. Following the War, programmed instruction offered the budding training profession a highly attractive alternative to the established pragmatic methods of training. Pedagogically, the TWI programme was presented as innovative and dynamic. An official publicity leaflet described it as using

> The new method of approach by means of group discussion and actual practical demonstration by members of the group themselves [20].

Initial experiments almost invariably were used to justify further expansion of training units. Despite the rather negative experience of introducing programmed instruction at Brown and Polson, for example, Ruth Routh claimed that the experiment had "spotlighted the need for more training in the factory", and noted that "The personnel department are anxious to follow this through" (Routh 1967, 23). Replicated across one industry after another, this pattern helped legitimate a considerable expansion in the training function, whether as a partly autonomous unit within the larger organisation, or as a sub -unit within a more generic department (usually personnel).

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[16] *Ministry of Labour Gazette*, 73, 3, March 1965, 117.
[17] News and Notes, *Personnel Magazine* , August 1967, 7
[18] News and Notes, *Personnel Magazine* , October 1967, 15
[19] *Ministry of Labour Gazette*, 73, 4, April 1965, 161

The strength of the emerging training profession was considerably stimulated by the role of academic specialists. In 1966, the Ministry awarded £60,000 for research into training, to be administered by the Central Training Council's research committee [21]. Among the early beneficiaries were two young psychologists who subsequently enjoyed outstanding academic careers. Dr Peter Warr of the University of Sheffield received funding to "develop indices of the behaviour of foremen and managers and use the indices to establish criterion behaviour for training courses", while Dr John Annett from the University of Hull was funded "to survey and ass ess task analysis techniques and to examine their suitability for determining training requirements" [22]. In 1967, the Ministry approved a recommendation from the CTC to endow an Industrial Training Research and Documentation Centre for Programmed Instruction at the University of Sheffield, under the direction of Professor H Kay [23]. The rapid emergence of academic expertise, and its willingness to engage with industrial trainers and school teachers through bodies such as the Association for Programmed Learning, helped raise the status of the training profession, and legitimate its claim to be applying scientific principles to the everyday business of industrial training.

In this process, the language of training underwent a certain softening. This was marked by the shift, which took place in Britain in the early 1960s, from the use of terms like 'programmed instruction' to the language of 'programmed learning'. This partly reflected the construction of an alliance with educationists, who had normative, humanistic objections to the language of instruction. It might conceivably help raise the status of training; instruction sounded both mechanistic (the educationists' complaint) and low level (the trainers' complaint). But the linguistic shift also reflected the construction of an alliance with academic psychology, which wished to distance the object of its studies both from instruction and from teaching. The new term was a compromise that met the objections of all parties, and allowed for constructive engagement between them.

Conclusions

In a number of ways, then, behaviourism played an important part in the development of a distinctive training profession in Britain. Of course, this influence should not be exaggerated. The vast majority of industrial instructors appear to have adopted a largely pragmatic and more or less consciously atheoretical approach to their work [24]. But behaviourism certainly did provide a powerful intellectual underpinning for many of those who wrote about training practices, as well as for those who trained the trainers, and for a minority of professional trainers. It also provided the basis for a coalition between industrial trainers and their representatives on the one hand, and a group of sympathetic academic psychologists from the behaviourist tradition on the other. Finally, behaviourism provided a common vocabulary for those who for a long time were the dominant voices in policy making, particularly ins ide the Ministry of Labour.

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[20] Ministry of Labour and National Service, *Training Within Industry for Supervisors*, 1946, Federation of British Industry Archive, MRC 200/F/3/T2/2/16.
[21] *Ministry of Labour Gazette*, 74, 6, June 1966, 284
[22] *Ministry of Labour Gazette*, 74, 9, September 1966, 570.
[23] *Ministry of Labour Gazette*, 75, 5, May 1967, 393

However, behaviourism had its limits, and these in turn placed constraints on the development of training. First, programmed learning remained largely a set of techniques for initial training, where they were both more advanced and more pervasive than in continuing training. In a national survey in England in 1966, it was reported that "the most popular application of programs is to the training of apprentices" (Romiszowski 1967, 212). The Centre Training Committee expressed its concern that "little work has yet been done regarding older people" (by which it meant the over-35s), and called for recognition of "how important retraining is going to be as some of the older skills are replaced by the new skills required by automation" [25]. However, the training boards had largely focussed their attention – and funding – on initial training (Romiszowski 1967, 212); in the absence of a statutory framework, the retraining of adults in Britain fell victim to market failure. Of course, this was hardly a direct consequence of behaviourism. However, experiments in applying programmed instruction to adults were not as persuasive as those involving younger people. In London Transport, for example, experimental evaluations showed that the use of programmed instruction proved far more effective at initial training than in the retraining and updating of adults (Neale, Nye and Belbin 1968).

Second, and perhaps connected with behaviourism's difficulties in adult training, programmed learning was never quite as flexible and individualised as its advocates claimed. An early study on foremanship sponsored by the British Association for Commercial and Industrial Education (BACIE) noted that TWI, while admirable, suffered from "a certain rigidity and . . . a danger of over-simplification", particularly within firms where trainers were of more variable quality than those employed by the Ministry [26]. Such criticisms were multiplied through the 1960s, when technological innovation and industrial reorganisation were challenging existing forms of regulation of the labour process. Behaviourism's focus on precisely specified objectives followed by a step-wise structuring of a program around small units that led directly to immediate feedback – the basis of its claim to scientific status – were increasingly viewed as a source of rigidity and barrier to change. Eric Thorne, deputy director of the Institute for Supervisory Management, was one of those who considered the rigidity a risk to productivity and innovation. In a speech to a 1967 summer school, Thorne was reported as claiming that "it was worse than useless to train a man to do yesterday's job instead of tomorrow's", and calling for training to develop the qualities of dealing with the unforeseen [27]. However, he was far from being alone in this respect.

Third, the principles of programmed instruction were founded on a strict division betwe en conception and delivery. Most organisations that adopted programmed instruction used commercial products, which were widely advertised in the trade press. In a 1966 survey of 741 English companies, fifteen employed full time program writers, while only twenty-six had part time program writers (Romiszowski 1967, 214). This division between design and delivery clearly facilitated central control over quality and content, but I would hypothesise that it also deskilled the trainers. Indeed, I would go furthe r and suggest that the desire for control and automation – inherent features of programmed learning - hindered other approaches. Ironically, some supporters of

[24] This judgement is based on personal experience in 1967 -68, and on a small number of oral history interviews.
[25] Central Training Council: the use of programmed instruction in industrial training, *Ministry of Labour Gazette*, 74, 2, February 1966, 67
[26] Report on Progress of the Foremanship Research Project Sponsored by the Committee on Industrial Productivity, 1950, Federation of British Industry Archive, MRC 200/F/3/T2/2/16.

programmed instruction believed this to be the case. Ruth Routh, for example, complained that the main difficulty in the hosiery industry was "not to sell programmed instruction, but to sell training. . . . PI should not be used in isolation but should form part of a whole training system" (Routh 1967, 23). At this stage, it is unclear whether this criticism was justified, but the fact that it was made at all suggests the need for further investigation.

The professionalisation process is rarely as unilinear as it might seem at first glance, as this brief examination of the uneven and complex development of vocational training as an occupation in Britain illustrates. Behaviourism inhibited the development of the training profession in some respects, while facilitating it in others. Following its initial introduction in wartime, its rise was sparked largely by the same factors that fuelled the turn towards modern Fordist systems of organisational control in general, just as its demise is associated with the wider shift to the more flexible regulatory regimes of globalised capitalism. However, a number of questions remain for further investigation. I would certainly argue the case for a more detailed account of the application of programmed instruction within the socio- economic context of specific workplaces, with attention to the possibility of resistance and subversion both by those who were employed as instructors and those who underwent the training. It seems possible from the evidence currently available that there was a gender effect in programmed learning, with conception and design being largely male areas, while delivery was more mixed; at the least, this merits further investigation. And there is certainly a case for a wider, more rounded study of the professionalisation process within vocational training. The present analysis, albeit a limited and small scale one, suggests that this was an uneven and complex process. It was one in which a number of interest groups played a part, and whose outcomes represented the interplay of power and authority as well as the force of a particularly focused theory of teaching and learning.

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Training policies valuation in european enterprises by studying the valuation practices

Comprendre les politiques de formation d'entreprises européennes par l'étude de leurs pratiques d'évaluation.

Construction d'un référentiel d'évaluation commun pour conduire une étude comparée multi-nationale.

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Abstract

The realisation of an european study program about the training policies in enterprises bring our research team to the analysis of their valuation practices, in order to identify significants elements about these politics. The differents exercices of a regulation function, which is admited for valuation, allow to find different training management styles, which can traduce in the training policies, the underlying enterprises cultures. The study of eigtheen enterprises in three european countries (France, Portugal, Sweden) consists, from a common methodology defined between the three research teams, in analysis of methods and tools used in enterprises to valuate and in analysis of the obtained results. This common methodology is based on theorical model of "referentialisation" (the referent whole building necessary to valuate), which is developed in France by Professor Gerard FIGARI..

Key words : Valuation, Politic, Continue Training, Piloting.

L'équipe du GREIF (Groupe de Recherche en Evaluation et Ingénierie de la Formation – Université de Grenoble) a participé de 1998 à 2001 à un programme européen d'étude LEONARDO, qui visait à interroger les politiques de formation dans des entreprises européennes, à travers l'analyse des plans de formation continue de ces dernières.

La réalisation de ce programme, intitulé TRAPPO - Training Policies and Practices in Organisation - en partenariat avec une équipe universitaire portugaise (Université du Minho, BRAGA) et suédoise (JONKOPING International School), a consisté ainsi à :

- construire une méthodologie commune d'évaluation des politiques de formation des entreprises. Celle-ci est fondée sur le modèle de la référentialisation (FIGARI, 1994), qui a paru pertinent pour développer une étude comparative multi-nationale.

- conduire, dans chaque entreprise volontaire, une exploration (via entretiens et questionnaires) de ses plans et pratiques de formation, ainsi que de leur évaluation.
- confronter les résultats obtenus sur les 18 entreprises étudiées dans les 3 pays et les outils mis en oeuvre dans chacune d'elle.

Ce projet européen TRAPPO visait à étudier les politiques de formation d'entreprises (françaises, portugaises et suédoises), qui sont repérables dans chacune d'elles à travers les modalités d'élaboration, de conduite et d'évaluation des plans de formation, et les effets de ces derniers.
L'objectif de ce projet d'étude était de construire, avec les partenaires européens et les entreprises participantes, une méthodologie générale et des outils d'évaluation qui permettent de produire une analyse comparée entre les 18 entreprises européennes étudiées.

Le propos de cette communication est de présenter le cadre de référence etla méthodologie mise en œuvre pour conduire les études de cas, autour de 4 axes de recherche, proposés distinctement par les 3 équipes de recherche européennes et qui conduisaient à poser les questions suivantes :

1. La *Construction d'une identité organisationnelle* :
Quelles sont les relations entre la politique de formation et la construction d'une identité organisationnelle, au sein de l'entreprise ?

2. La *Citoyenneté dans l'entreprise* :
Quelles sont les relations entre la politique de formation et l'idée de citoyenneté au sein de l'entreprise ?

3. Les Réseaux professionnels :
En quoi la politique de formation favorise-t-elle un développement des compétences de professionnels qui s'inscrivent dans des réseaux internes et extérieurs à l'entreprise ?

4. Le *Pilotage des politiques de formation* : Comment l'évaluation est elle utilisée pour conduire et faire évoluer la politique de formation ?

Chacune de ces questions a permis de fonder la construction d'un référentiel d'évaluation commun aux équipes de recherche, pour conduire les études de cas dans les entreprises de leur pays respectif.
A partir de ce référentiel commun, ont pu être développés des outils d'investigation construits selon la même structure qui devaient être adaptés, dans leur langage et leur présentation, aux réalités nationales et culturelles propres aux entreprises étudiées dans les 3 pays.

La conduite de cette expérience méthodologique d'investigation commune à 3 équipes de recherche aux cultures spécifiques a permis de vérifier l'utilité de cette construction préalable d'un référentiel commun.

Elle a permis en outre de construire et de tester un cadre d'analyse des politiques de formation d'entreprise qui, en croisant les 4 axes de recherche proposés par les équipes, favorise la mise en relation de ces politiques de formation avec les caractéristiques (organisationnelles, contingentes, historiques, relationnelles...) qui façonnent l'identité et la culture de ces entreprises, tels que divers auteurs anglo-saxons et latins ont pu en proposer

des modèles théoriques (MARCH J & SIMON H, MINTZBERG H. , SAINSAULLIEU R .).
Cet aboutissement du programme d'étude, non encore formalisé, aujourd'hui sera évoqué en conclusion de cette communication.

Celle-ci s'attachera ci-après à présenter dans une première partie, le modèle méthodologique de la Référentialisation (développé par le Professeur G. FIGARI) et à développer dans une seconde partie, les fondements théoriques et les modèles utilisés pour conduire les investigations sur chacun des axes de recherche retenus dans le programme TRAPPO.

I. Méthodologie générale pour un programme d'étude comparée : mise en oeuvre d'une Référentialisation.

Le projet européen d'étude TRAPPO visait à évaluer les politiques de formation des entreprises européennes, à travers l'étude des modalités d'élaboration et de conduite des plans de formation développés dans chacune d'elle.

La conduite d'une « recherche évaluative » sur les politiques de formation d'entreprise, consiste à collecter et traiter des informations relatives à celle-ci, qui permettent d'en dégager la valeur ou les significations, à travers les différentes interrogations soulevées par les partenaires de cette étude en construisant avec eux et à partir de celles-ci, un référentiel d'évaluation commun.
Ces partenaires sont naturellement ceux qui réalisent l'étude et composent les trois équipes de recherche européennes associées dans le projet TRAPPO. Ils désignent aussi des membres des entreprises dont la politique de formation est étudiée et qui peuvent contribuer à améliorer l'adéquation du modèle d'interrogation construit par les chercheurs aux réalités spécifiques de leur entreprise.

Notre définition de l'Evaluation utilisée pour fonder la méthodologie d'investigation mise en œuvre dans cette étude, est empruntée à STUFFELBEAM (1980) pour la considérer comme: « le processus par lequel on délimite, obtient et fournit des informations utiles permettant de juger des décisions possibles ». Elle peut aussi être définie comme « un processus de comparaison entre un objet observé et un modèle de référence construit par les auteurs de l'évaluation ». C'est à la construction préalable de ce modèle de référence ou Référentiel d'évaluation que s'est attachée notre équipe dans la première phase de cette étude.

La construction d'un référentiel d'évaluation consiste ainsi à définir un système de référence commun à ces partenaires, à partir duquel les éléments d'information recueillis pourront être interprétés et la valeur (ou le sens) de la politique étudiée peut être fondée.

Elle nécessite la conduite d'un processus de recueil d'informations pour construire ce modè le de référence dans une phase préalable (exploratoire), où les éléments de connaissance de l'objet d'étude sont recherchés selon le modèle ICP (développe par G. FIGARI (1994).

Ce modèle peut être rapproché à la fois du modèle développé par Stuffelbeam (CIPP) :

Modèle CIPP		*Modèle ICP*
C - Context	⟶	I. Induit

I - Input ⟹

P - Processus C. Construit

P - Product P. Produit

L'élaboration du Référentiel d'Evaluation est menée à partir de ce recueil organisé d'informations sur la situation étudiée. La construction des instruments d'étude est réalisée en fonction de ce référentiel. L'efficacité des instruments d'étude découle de la précision et de la pertinence des indicateurs choisis pour évaluer, au regard du référentiel et en fonction des réalités de chaque entreprise étudiée.

I.1 - PHASE EXPLORATOIRE : Le recueil des éléments constitutifs de la politique de formation des entreprises et l'organisation de ces informations.

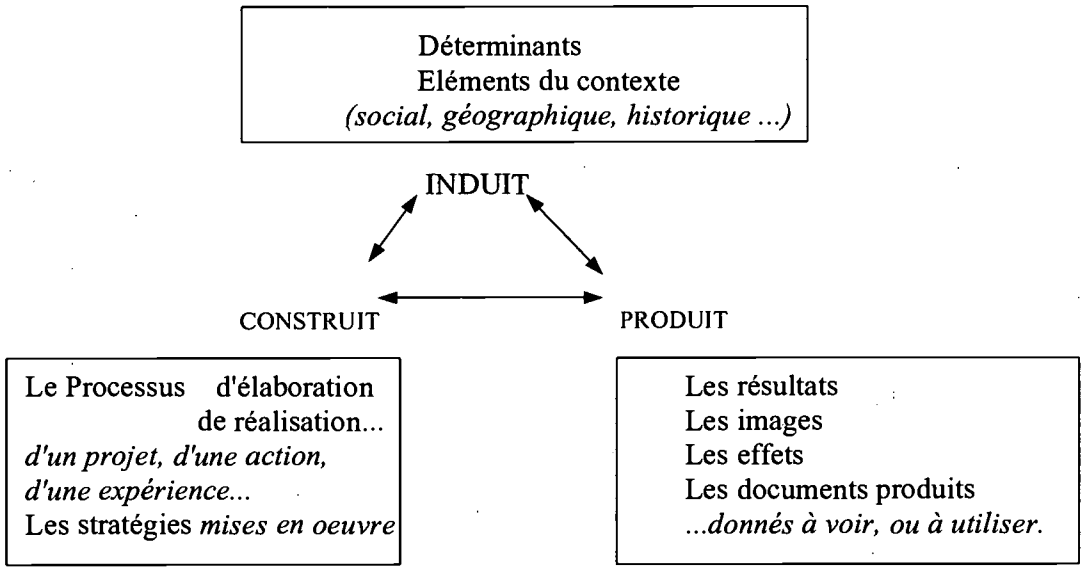
La première interrogation des entreprises étudiées sur leur activité de formation permet de fournir des informations diverses relatives à :

- la situation et l'activité de l'entreprise,
- sa production et sa stratégie globale,
- l'organisation de la fonction formation,
- les objectifs assignés à l'activité de formation,
- les modalités de l'analyse des besoins de formation,
- les actions réalisées,
- les modalités et les résultats de l'évaluation des actions conduites.
- etc...

L'ensemble de ces éléments recueillis auprès de différentes sources personnelles (dirigeants, responsables formation, employés...) et documentaires (documents prescriptifs et de bilan) nécessite un classement rationnel. Celui-ci doit permettre de dégager, pour chaque entreprise, les éléments clefs qui paraissent significatifs de la politique de l'entreprise, pour une étude évaluative approfondie de celle-ci et une comparaison ultérieure avec celles des autres entreprises.

Ce classement peut être fait selon le modèle ICP (Induit, Construit, Produit), schématisé ci-après :

Schéma ICP :



I.2 - PHASE ETUDE - le Projet d'évaluation : Référentiel et instruments.

La construction du Référentiel d'évaluation à partir duquel sont construits les outils d'investigation nécessite conjointement de déterminer :
- Les éléments qui composent l'Objet à évaluer ; il s'agit ici des composantes de la politique de formation.
- Les référents de l'évaluation ; Ils résultent des problématiques d'études définies par les équipes de recherche dans le programme TRAPPO :
  - Identité organisationnelle
  - Citoyenneté dans l'entreprise
  - Réseaux professionnels et personnels
  - Pilotage des politiques de formation
  -

- Les critères d'évaluation ; ils permettent de formuler les jugements de valeur, en fonction des quatre référents énoncés précédemment.

Il reste alors à construire des indicateurs qui permettent d'apprécier les différents éléments au regard des référents et selon les critères retenus : la constitution d'un corpus commun de ces indicateurs de l'évaluation, pour l'ensemble des 18 études conduites dans les entreprises a permis d'établir une grille de comparaison de ces politiques de formation et de fonder les outils spécifiques d'investigation (analyse documentaire, grille d'entretien, questionnaire).

I.2.1 - L'objet « politique de formation »

Il est défini à travers deux dimensions à évaluer :

- *Les projets et les pratiques de formation* : il s'agit d'interroger les contextes, les processus d'élaboration et de mise en œuvre ainsi que les résultats des projets de formation dans les entreprises.
- *Les pratiques et les outils d'évaluation de la formation* : il s'agit de repérer, à travers les formes, les contenus et les modes d'évaluation existants, les éléments signifiants des politiques de formation.

Il est fait ici l'hypothèse que l'analyse des instruments de pilotage d'une politique de formation, est signifiante pour comprendre la politique de formation elle-même.

I.2.2 - Le choix des référents pour évaluer.

La méthodologie d'évaluation utilisée, inspirée du modèle de la référentialisation (FIGARI, 1994), repose sur le postulat que l'évaluation est « multiréférentielle » (ARDOINO, BERGER, 1989), c'est à dire qu'elle doit se construire en fonction de plusieurs repères ou référents, qui sont choisis comme les axes privilégiés de l'étude, par les équipes de recherche du programme TRAPPO.

La conduite, dans le cadre du programme TRAPPO, « d'études évaluatives » sur les politiques de formation des entreprises doit ainsi prendre en compte les divers référents proposés.
On peut entendre ici les référents d'évaluation comme des problématiques pour traiter, analyser et interpréter les politiques de formation. Ces problématiques sont formulées elles-mêmes en référence à des théories ou concepts développés dans les sciences de l'éducation et les sciences politiques.

Quatre référents ont pu ainsi être dégagés des échanges entre les équipes de recherche sur le projet général du programme TRAPPO (tel que défini dans la candidature LEONARDO).
Ils ont été présentés avec leur question évaluative globale en introduction de cet exposé et sont développés dans la partie II, ci-après.

I.2.3 – La détermination des critères

La prise en compte différenciée, voire contradictoire, de la satisfaction des attentes, intérêts ou objectifs des différents acteurs des politiques de formation d'entreprise, permet d'évaluer celles-ci au regard des référents retenus dans les études. Ces critères doivent guider le choix d'indicateurs pertinents.

On pourra ainsi (par exemple) apprécier la contribution de la politique de formation à l'identité organisationnelle de l'entreprise et à l'image d'une citoyenneté de l'entreprise, à travers le critère d'égalité d'accès de toutes les catégories de salariés aux formations proposées. Cette égalité (ou inégalité) d'accès pourra ainsi nous informer sur les distorsions éventuellement repérables dans les phénomènes d'identification, selon les différentes catégories de ces personnels.

Le choix de ces critères permet de chercher systématiquement et conjointement à savoir :
- quelle est la prise en compte et comment sont satisfaits les intérêts spécifiques des salariés de l'entreprise, dans la politique de formation ?
- comment sont formulés et comment est appréciée la réalisation des objectifs de l'entreprise dans sa politique de formation ?

I.2.4 - La recherche des indicateurs

Les indicateurs se définissent comme le signe ou la trace d'un phénomène et permettent la mesure du niveau de ce phénomène. Ils renvoient toujours, du moins implicitement, à des critères et constituent le moyens de concrétiser ceux-ci.

La matrice globale d'analyse comparative des 18 politiques de formation d'entreprises étudiées dans les 3 pays, a pu être établie à partir de la proposition par chaque équipe de recherche, des indicateurs les plus adaptés à une comparaison de ces politiques, au regard des référents d'études retenus.

I.2.5 - Formalisation du REFERENTIEL D'EVALUATION

Ce référentiel d'évaluation (ou cette matrice) peut être ainsi formalisée à travers un tableau ou matrice présentée en annexe.

I.2.6 - La construction et la passation des outils d'investigation

L'outil principal d'investigation commun, construit et utilisé à partir de ce référentiel d'évaluation, a consisté en un questionnaire diffusé à l'ensemble des personnels ou à des échantillons de ceux-ci, selon la taille de l'entreprise, dans les entreprises de deux des trois pays (France et Portugal).
L'analyse des documents descriptifs et prescriptifs, de nature « littéraire» ou quantitative a été également conduite dans les différentes entreprises, pour renseigner les indicateurs retenus dans le référentiel.
Des analyses documentaires portant en particulier sur :

- des documents littéraires d'orientation générale de l'entreprise, d'étude préalable et de définition de la politique de formation, de programmes prescriptifs (plans annuels, program me de formation intra, règles d'attribution de bourses, etc.), de communication sur le plan de formation, de bilan et d'évaluation (rapports).
- des documents chiffrés, de dotations budgétaires initiales, de bilans financiers et de statistiques sur la réalisation des formations.

Des entretiens avec les responsables de formation et des représentants du personnel ont été également conduit, à partir de grilles d'entretiens, centrés sur certains indicateurs spécifiques du référentiel.

Le questionnaire visait quant à lui à connaître en particulier :

- Les attentes des salariés ou de l'employeur à l'origine des formations suivies, pour nourrir l'analyse relative aux relations de la politique de formation avec les processus d'identité dans l'organisation et aux modes de pilotage de cette politique.
- Les perceptions par les salariés de la politique de formation de l'entreprise pour compléter l'analyse relative à son pilotage (modes de recueil de la demande, modes d'information et modes d'évaluation) ainsi que celui du rapport à la citoyenneté (dans l'étude du sentiment d'implication du personnel à la politique de formation)
- L'appréciation portée par les bénéficiaires sur les formations qu'ils avaient suivies et les apports ou effets de celles-ci, en référence aux quatre problématiques retenues dans l'étude.

Sa diffusion au sein des entreprises françaises a produit un nombre substantiel de réponses, soit de l'ordre de 20 à 55 % de leur effectif, avec une représentativité des « échantillons » de réponses contrôlés en croisant les paramètres suivants :

- La répartition homme/femme des répondants par rapport à celle de l'ensemble du personnel,
- L'ancienneté des salariés répondants,

- La répartition par type d'emploi,
- La représentation de tous les lieux d'implantation des établissements dans le cas d'entreprises géographiquement éclatées.
- Les statuts d'emplois (nature des contrats de travail)
- Les qualifications ou formations initiales des personnels.

Au delà de l'exploitation des résultats des questionnaires, l'intérêt de leur utilisation résidait aussi dans le fait de vérifier la pertinence des questions posées et des indicateurs retenus pour celles-ci.

Le traitement a été réalisé pour l'essentiel par tris à plat, dans chaque entreprise. Un travail de tri croisé entre les réponses de toutes les entreprises européennes étudiées doit être effectué ultérieurement, pour permettre de dégager les corrélations pertinentes entre les données retenues à l'appui du repérage des catégories proposées par les modèles d'analyse utilisés pour chaque problématique.

II. Fondements théoriques des axes de recherche retenus dans le programme européen d'étude TRAPPO

Le référentiel d'évaluation élaboré par les 3 équipes de recherche européennes a été construit en prenant comme référents, les 4 problématiques . proposées par l'une ou l'autre des équipes et à partir desquelles ont pu être analysées les différentes données recueillies au moyen des instruments d'étude.
Leur développement, à partir de la formulation d'un cadre théorique spécifique, a permis de préciser les questionnements autour de chacun d'eux en proposant des indicateurs pertinents.

Le choix de ces quatre axes s'inscrit à la fois dans les préoccupations de recherche des équipes européennes associées à ce projet et dans celles de l'Union européenne, telles qu'elles ont pu être formulées en novembre 2000, par les états européens au colloque de BIARRITZ et ainsi reprises dans le « Mémorandum sur l'Education et la Formation tout au long de la vie » qui en a été produit. Ces axes y constituent ainsi autant de questions d'évaluation pour la politique européenne en matière de formation.

Enfin le choix de ces référents d'études, contourne volontairement l'interrogation directe de la contribution de la formation continue à l'enjeu de développement de l'entreprise, envisagé à travers le critère classique « d'efficacité productive ».
La diversité de nature des entreprises étudiées dans le programme (industrielle, éducatives, de soins) aurait rendu difficile des comparaisons à ce niveau.

II.1 – Politiques de formation et identité organisationnelle

L'identité organisationnelle au sein d'une entreprise constitue une préoccupation de recherche inspirée par la sociologie des entreprises et du travail.
Les recherches dans ce domaine interroge la fonction symbolique de l'entreprise, à travers la notion de culture d'entreprise, génératrice de phénomènes d'identité organisationnelle pour les personnels qui y sont employés.

Culture d'entreprise

Les diverses définitions de la culture d'entreprise s'entendent pour désigner un « système de références » qui guide ou oriente les comportements et les relations professionnels au sein de l'entreprise. Celui-ci peut être envisagé comme ensemble de références « partagées dans l'organisation et construites tout au long de son histoire en réponse aux problèmes rencontrés » (E. SCHEIN, 1985).
Il est aussi envisagé comme ensemble de sous-cultures internes à l'organisation qui se rencontrent et composent entre elles, pour constituer des cultures propres à des entreprises particulières (SAINSAULIEU).
Dans une vision fonctionnaliste, il est pensé comme un « ensemble de règles » explicites ou implicites nécessaires à l'équilibre du système de l'entreprise (Théories de la régulation, REYNAUD).
Enfin selon les approches interactionnistes, la culture d'entreprise est envisagée comme le produit des interactions entre les membres de l'organisation d'une part et entre l'organisation et son environnement d'autre part. Elle peut enfin être vue comme un construit collectif ou système d'action concret (CROZIER, FRIEDBERG).

Entendue comme s'appliquant à l'organisation (collective), la culture d'entreprise constitue un concept utilisé pour comprendre le fonctionnement de cette organisation. Celui-ci et le rôle de la formation en son sein peuvent ainsi être analysés à travers le modèle proposé par P. FROST (1991) entre perspectives intégratives, différenciatrices et fragmentaires. Ce modèle permet de faire le lien entre formation, culture d'entreprise et identité professionnelle, par les différentes configurations qu'il propose (L.L. TORRES, 1999).

Identité professionnelle

La problématique de l'identité professionnelle étudiée en particulier par C. DUBAR et R. SAINSAULIEU, s'intéresse aux rapports établis par les individus avec leur activité et leur organisation de travail, en ce qu'ils participent aux processus de structuration identitaire à l'œuvre en chaque être humain.
Envisagée comme produit d'une « négociation identitaire » (DUBAR, 1991), d'une dualité entre « identité sociale et virtuelle » (GOFFMAN, 1968) ou de l'expérience relationnelle et sociale du pouvoir (SAINSAULIEU, 1988), l'identité professionnelle et la contribution de la formation continue dans l'entreprise à celle-ci peuvent être lues en particulier à travers les modèles proposés par SAINSAULIEU de la fusion, de la négociation, du retrait ou des affinités.

Formation continue

La formation continue dans l'entreprise a été organisée en France par les lois de 1971 sur la formation permanente. Elle a connue depuis cette date une évolution concomitante avec celles de l'emploi (développement du chômage), du travail (dématérialisation), de l'économie (abandon des politiques keynésiennes) et des relations sociales au sein de l'entreprise (individualisation). Cette évolution de la formation dans l'entreprise s'est faite dans le sens une plus grande instrumentalisation de la formation continue au profit des objectifs d'efficacité des entreprises et une maîtrise plus directe de leur politique de développement des compétences au travers des plans annuels de formation continue, et ce, au détriment parfois du droit individuel des salariés reconnu en France, à se former librement et à choisir ce faisant leur formation.
Une telle évolution a conduit en particulier les entreprises à privilégier aujourd'hui des pratiques de formation collective pour leurs personnels, par des actions commandées aux organismes prestataires sur des objectifs annuels fixés dans le plan de formation, au détriment de « formations sur catalogues » dans lesquelles peut s'inscrire individuellement tel ou tel salarié. Les formations « Intra » paraissent prendre le pas sur les formations externes.

L'étude des politiques de formation d'entreprise selon la problématique de l'Identité organisationnelle, a cherché à dégager ainsi des configurations différenciées de la politique de formation de chaque entreprise, à partir du modèle d'analyse ci-après, proposé par L.L. TORRES de l'équipe portugaise de recherche associée au programme et attachée à l'Université du Minho à BRAGA :

PERSPECTIVES D'ANALYSE	TYPE D'IDENTITE	CONCEPTION DE LA FORMATION	FORMALISATION DE LA FORMATION
Perspective intégrative	Identité organisationnelle	Formation/socialisation sur le lieu de travail	Projet de formation/entreprise
Perspective différenciatrice	Identités Professionnelles	Micropolitiques de formation	Sous projets de formation
Perspective fragmentaire	Identités individuelles	Formation intermittente et discontinue	Plans casuels (individuels) de formations

Les études réalisées dans les entreprises, se sont attachées ainsi à repérer sur cet axe de recherche les caractéristiques dominantes de la conception et de la mise en œuvre des politiques de formation qui permettent de situer celles-ci par rapport à l'une ou l'autre des 3 perspectives proposées ci-dessus.

L'hypothèse était ainsi faite que la formation (et la politique de l'entreprise en la matière) peut favoriser « l'attachement identitaire » des personnels à leur organisation de travail. Sa confirmation a été ainsi recherchée à travers des éléments suivants :

A. - Les formulations et références aux principes, valeurs et orientations de l'entreprise dans ses documents relatifs à la formation,

B - Les Caractéristiques de l'organisation et de son personnel,

C - Les Objectifs de la politique de formation de l'entreprise : Ceux-ci peuvent recouvrir des visées « utilitaires » (pour le poste de travail), sociales (pour la promotion des salariés) ou identitaires (pour les individus salariés),

D - L'élaboration de la politique et du plan de formation,

E - La structure des plans et les modalités de formation :

- La part des formations «intra» dans le plan de formation, pour leur contribution spécifique à l'identité collective des participants.
- La « Culture » de Formation continue dominante de l'entreprise, notamment dans les formes pédagogiques des formations réalisées.

F - Les stratégies individuelles dans les demandes de formation : Celles-ci peuvent recouvrir des visées « intégratives » ou plus distanciées vis à vis de l'organisation de travail

G - Les Effets des formations suivies : sur l'exercice de la fonction, le rapport à l'entreprise, les relations professionnelles.

H - La Satisfaction vis à vis de la politique de formation de l'entreprise.

II.2 – Politiques de formation et citoyenneté

Attaché traditionnellement au domaine public et à l'appartenance à une communauté politique spécifique, le plus souvent un Etat, le concept de citoyenneté, issu des sciences

politiques, se comprend à travers un ensemble de droits et devoirs au sein de la communauté concernée.
Il est élargi, dans le projet d'étude Européen TRAPPO, à l'idée de citoyenneté dans l'organisation, (droits et devoirs des personnels au sein de l'organisation) et citoyenneté de l'organisation (relatif aux modalités du pouvoir d'organisation et de gestion de l'entreprise). Celle-ci est associée aussi à une notion de citoyenneté sociale, selon une définition juridique des relation sociales au sein de l'entreprise.
L'intérêt de cette notion de citoyenneté dans l'organisation de travail, semble résider dans l'enjeu de démocratisation de l'entreprise qui se dessine entre les tendances contradictoires de la recherche permanente et « asservissante » de la compétitivité des entreprises , d'une part, et de la concession progressive d'autonomie des personnels, dans les politiques de gestion de ressources humaines s'appuyant sur une stratégie de revalorisation du capital humain. Elle interroge en l'occurrence la place et le rôle des formes de représentations collectives des salariés dans l'entreprise constituées par les syndicats.
Les limites de l'approche de l'organisation de travail par la citoyenneté (pointées par leurs auteurs), résident en particulier dans la nature asymétrique du pouvoir au sein de ces organisations, en faveur de leurs dirigeants.
L'interrogation de la fonction de la formation au regard de la question de la citoyenneté vise (en simplifiant) à repérer si la politique de formation a pour effet de favoriser un effet d'intégration dans l'organisation, c'est à dire à ces normes de fonctionnement (par nature inégalitaires et asymétriques), voire de réinsertion ou à l'inverse un effet d'autonomie au sein de l'organisation.
Cette interrogation qui entend privilégier les approches sociologiques et politiques (sur celles plus psycho-sociologiques), peut porter sur les modes de participation aux décisions, l'autonomie des individus et des groupes, la justice des relations sociales ou encore les espaces offerts à la libre expression au sein de l'entreprise...
Une telle problématique présume, (par hypothèse), l'incidence possible de la citoyenneté organisationnelle sur l'efficacité même de l'entreprise.

Les éléments d'investigation retenus dans le référentiel en apport avec cette problématique ont porté sur :
A - Les références à la citoyenneté au sein de l'entreprise,
B - La Structure de l'organisation
C - Le Statuts des personnels
D - L' Information sur la politique de formation
E - Les Choix de formation
F - L'Elaboration de la politique de formation
G - L'Accès à la formation
H - Les Effets « citoyenneté » des formations suivies : sur la fonction, le rapport à l'entreprise, les relations professionnelles
I - L'Evaluation et la communication de ses résultats.

II.3 – Politiques de formation et réseaux professionnels

L'engouement des sciences sociales pour la notion de réseau qui vient du latin « retis » et qui signifie « un ensemble de liens entrelacés », est un peu tardif en France.

En fait les réseaux sur lesquels les sciences sociales portent, renvoient souvent à des réalités anciennes que l'on appelait : cercle, clan. Pourtant la diffusion de la notion de réseaux au sein des sciences sociales semble traduire un déplacement dans le regard que les chercheurs posent sur la réalité. En connotant l'idée d'informel, de circulation, d'échange, de confiance...la notion de réseau met l'accent sur des réalités restées inaperçues et pourtant cruciales pour comprendre les interactions sociales ou le fonctionnement d'une organisation.
Pour le sociologue, procéder à une analyse en termes de réseaux oblige ainsi à porter l'attention sur les relations qu'entretient un individu avec autrui plutôt que sur une catégorie sociale et, plutôt sur les relations horizontales que sur les relations verticales (hiérarchies).
Pour un économiste, l'analyse en termes de réseaux permet d'envisager une troisième forme de coordination des échanges entre le marché et l'Etat : elle amène à souligner le rôle des relations de confiance, des échanges non marchands. Elle conduit à prendre en compte les effets induits (ou externalisés) par l'organisation réticulaire des firmes et des services.
Pour les relations internationales, parler de réseau revient davantage à mettre l'accent sur les phénomènes de transnationalité, cela conduit aussi à souligner le poids de nouveaux acteurs se jouant des frontières nationales.
L'analyse en terme de réseau offre l'intérêt de substituer une vision dynamique à une vision statique de la réalité, en mettant l'accent sur la circulation et les flux plutôt que sur l'accumulation ; sur les processus de coordination, de coopération ou de régulation plutôt que sur les institutions.
Dans cette perspective, les acteurs – qu'ils soient des individus ou des organisations – apparaissent à la fois autonomes et déterminés parce que soumis aux contraintes que font peser sur eux les acteurs auxquels ils sont reliés.

La formation continue des professionnels est supposée renforcer les compétences propres à des métiers ou des spécialités d'application de ceux-ci.
L'identité attachée au métier de chaque personnel est une caractéristique plus ou moins prononcée selon les secteurs d'activité professionnelle. La formation continue peut ainsi être suivie dans des réseaux de métiers ou de spécialité, bien identifiés et structurés.

Les actions de formation continue suivies au sein de réseaux professionnels extérieurs à l'entreprise constituent ainsi un indicateur important de l'ouverture de sa politique de formation, dans sa recherche de développement des compétences internes et dans la construction même des identités collectives dans l'entreprise par la confrontation à d'autres cultures et d'autres pratiques.

Les actions de formation développées en « intra » au sein de l'entreprise, s'inscrivent également dans une telle logique de réseau, dès lors qu'elles peuvent avoir comme fonction de mettre en relations, productives de compétences nouvelles, ces professionnels.
Cette logique de réseau interne est en particulier de nature à favoriser l'identité organisationnelle d'ensemble de l'entreprise, à travers en particulier les coopérations et les projets transversaux que les professionnels peuvent ainsi engager.

La problématique de réseaux appliquée à la formation a conduit à interroger la politique des entreprises en la matière sur les éléments suivants :
A - Les Initiatives de formation suivies dans des réseaux de métier ou de spécialités extérieurs à l'entreprise et celles mises en œuvre en interne dans l'entreprise.
B - Les motivations à se former dans ces cadres suggérant la possible recherche d'ouvertures professionnelles nouvelles mais aussi de distanciation à l'entreprise .

C - L'Expression des changements et évolutions générées par les formations dans la pratique professionnelle et les rapports à l'entreprise et au métier, indicatives des bénéfices spécifiques des formations « par réseaux ».

II.4 – Evaluation et pilotage des politiques de formation

Etudier les politiques de formation dans le contexte des entreprises revient à poser la problématique du rapport entre le pilotage de ces politiques (en référence aux théories cybernétiques de la gouvernance) et son évaluation (en référence aux Sciences de l'Education dans l'un de leurs champs les plus spécifiques consistant à modéliser et à instrumenter l'évaluation des processus de formation). La question ainsi posée est de savoir en quoi en quoi l'évaluation est utilisée pour conduire et faire évoluer la politique de formation.

Le "pilotage" est une notion héritée de la cybernétique, science du gouvernement préoccupée du contrôle, de la régulation et de la communication dans la machine et dans l'être vivant. Le *pilotage* désigne, lui, plus particulièrement, *la régulation de l'appareil* qu'il est chargé de "gouverner". C'est le modèle systémique bien connu (Von Bertalanffy, 1974, repris par Le Moigne, 1995), très satisfaisant pour l'esprit mais qui ne dévoile pas les secrets des processus en oeuvre dans la "boîte noire" elle-même. Le pilotage implique une vision globale de l'objet. G. De Landsheere (1994) définit le pilotage comme "*la prise de décision*...sur la base de constats aussi objectifs que possible, relatifs à l'état, au fonctionnement et aux produits des systèmes". 'Ils sont l'aboutissement d'une *construction de sens* à partir d'informations qualitatives et quantitatives constituant des *indicateurs*"

C'est alors qu'intervient la notion d'*évaluation* telle que définie sommairement en I (page 3) en se référant notamment à STUFFELBEAM. Selon le recours qui est fait à l'évaluation dans la conduite des politiques, quatre styles de pilotage ont paru pouvoir être distingués :

. *un style de pilotage "informel"* : c'est celui qui fonctionne sans "tableau de bord", sans dispositif systématique de traitement d'informations, mais à partir de priorités, de finalités, d'objectifs volontaristes. L'*évaluation* n'est ici pas ou peu envisagée comme pratique organisée et formalisée.

. *un style de pilotage "utilitaire"* : c'est celui qui consiste à privilégier telle ou telle résolution de problème, au coup par coup, dans un processus de gestion d'urgences ou de réponses à des pressions économiques ou sociales. L'*évaluation* se pratique par diagnostics limités et ponctuels.

. *un style de pilotage "rationnel"* : c'est celui qui dispose d'un appareil construit de recueil des demandes et des besoins (recours à des documents remplis par les individus et les services) et de programmation de la formation par catalogues élaborés en réponse aux besoins détectés. L'*évaluation* est présente sous forme de fiches de questionnement sur les besoins ou la satisfaction et parfois sur les performances.

. *un style de pilotage "prospectif"* : c'est celui qui s'adapte au processus *d'évolution des compétences* et tente de faire coïncider l'élaboration des objectifs avec les parcours individuels et collectifs des acteurs. On est dans une situation de *gestion de projets* dans laquelle les scénarios sont ouverts et l'incitation à l'innovation fait partie de la politique affichée. L'*évaluation* consiste à impliquer les acteurs dans le dispositif d'évaluation lui-même, dispositif participatif conçu comme accompagnement du pilotage de l'action.

Certes, aucun de ces styles n'existe à l'état pur. Certaines situations voient coexister des caractéristiques de plusieurs d'entre eux. Cette typologie peut cependant favoriser

l'explicitation par les partenaires intéressés du rôle souvent implicite accordé à l'évaluation et des conséquences sur le mode de pilotage de la formation.

La réalité d'un pilotage de la politique de formation induit par les formes de l'évaluation, ente ndue sous les deux fonctions (contrôle et signification), a été interrogée en conséquence à travers les éléments suivants :

A - Les modes de construction du projet de formation des personnels à travers les modes d'analyse de la demande (co-évaluation, auto-évaluation, suggestion externe)

B - Les modes de formulation de la demande de formation : enregistrement des demandes (personnalisée, globale, appel à l'initiative/autonomie)

C - La satisfaction exprimée vis à vis du mode de recueil des demandes

D - Les formes dominantes d'évaluation/bilan indicatives des priorités de l'entreprise : quantitatif/qualitatif

E - Les produits obtenus par les évaluations.

F - Les usages des résultats produits par les outils d'évaluation

Conclusion provisoire

Vers la recherche des corrélations possibles entre les catégories dégagées dans les modèles d'analyse relatifs aux 4 problématiques de l'étude TRAPPO.

La construction et la conduite de cette étude multinationale, associant trois équipes européennes, aux cultures et spécialités scientifiques différentes, a permis d'envisager le croisement des problématiques de recherche proposées par chacune d'elle, qui peut être représenté à travers le schéma suivant :

Référents/axes de recherche Modèles d'analyse	Politique de formation et identité organisationnelle	Politique de formation et citoyenneté	Développement des compétences et réseaux professionnels	Evaluation et pilotages des politiques de formation
	Perspective intégrative/ Identité organisationnelle Perspective différenciatrice / identité professionnelle Perspective fragmentaire/identités individuelles	Citoyenneté de l'organisation Citoyenneté dans l'organisation	Réseaux professionnels internes à l'entreprise Réseaux professionnels externes	Styles de pilotage : Informels Utilitaires Rationnels Prospectifs

L'exploitation isolée des résultats des études menées dans chaque entreprise suggère des correspondances entre l'identification de caractéristiques résultant de l'utilisation du modèle d'analyse élaboré pour chacune des problématiques. C'est le cas en particulier entre l'incidence des politiques de formation des entreprises sur leur identité organisationnelle et le repérage de styles de pilotage à partir de l'analyse de leur pratique d'évaluation.

Ainsi, le style de pilotage «utilitaire», visant la réponse au coup par coup à des besoins ponctuels de formation peut-il correspondre dans certaines entreprises à l'identification d'une perspective différenciatrice à la mise en œuvre de la politique de formation, du point de vue de l'identité organisationnelle. La réponse ponctuelle aux besoins de formation repérés favorise une hétérogénéîté de l'organisation autour de micro-projets sans cohérence d'ensemble.
L'accès des salariés au plan de formation peut y être alors inégalement réalisé (au regard des valeurs de citoyenneté dans l'entreprise) et l'utilisation des réseaux professionnels externes liés aux spécialités de métier peut être plus fréquente dans la proposition des actions de formation.

Ainsi encore le style de pilotage « prospectif », visant à adapter le profil des compétences aux projets d'évolution de l'entreprise peut-il correspondre à l'identification d'une perspective intégrative à la politique de formation. La « logique de projet » global qui caractérise cette pratique évaluative de la politique de formation, en cherchant à associer les acteurs de l'entreprise, contribue à une logique d'ensemble intégrative du management de l'organisation, visant à développer son identité organisationnelle globale.
Les projets de formation « intra », favorisant le développement des relations et des réseaux internes au sein de l'entreprise y prennent une part importante des budgets et des programmes de formation proposés. Le souci d'équité plus prononcé entre les personnels dans l'accès au plan de formation peut suggérer alors une citoyenneté formelle (et le cas échéant effective) de l'organisation plus évidente.

Ces correspondances entre catégories d'analyse des relations des politiques de formation avec la construction des identités des entreprises et avec le mode de pilotage de ces politique suggèrent ainsi une réalité différente de ces politiques de formation appréhendée sous l'angle de la citoyenneté, de et dans l'entreprise. Elles permettent d'envisager également des pratiques de formation différenciées, par l'utilisation ou l'incitation au développement des réseaux professionnels.

Ces corrélations, formulées ici comme hypothèses pour la poursuite de la recherche engagée, doivent être aujourd'hui systématiquement recherchées par le croisement des études menées dans les différentes entreprises où les mêmes outils d'investigation, mis au point à partir du référentiel d'évaluation commun, ont pu être utilisés.

Elles devraient permettre d'esquisser des profils différenciés des politiques de formation d'entreprises étudiées, à partir de l'analyse des « paramètres » communs construits dans les 4 axes de recherche qui ont structuré le référentiel de ce programme d'études TRAPPO.

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ANNEXE Référentiel d'évaluation

REFERENTS	ELEMENTS A EVALUER	CRITERES ET INDICATEURS
1. *Construction d'une identité organisationnelle* : Quelles sont les relations entre la politique de formation et la construction d'une identité organisationnelle ?	1.1 - Principes, valeurs et orientations de l'entreprise : Eléments fédérateurs 1.2 - Caractéristiques de l'organisation 1.3 - Objectifs de la formation de l'entreprise : 1.4 - Elaboration de la politique de formation 1.5 - Modalités de formation 1.6 - Stratégies individuelles dans les demandes de formation 1.7 - Effets des formations suivies : sur l'exercice de la fonction, le rapport à l'entreprise, les relations professionnelles. 1.8 - Intérêt (adhésion) des personnels à la politique de formation de l'entreprise.	*Existence* *Favorisante (d'une identité organ.)* *A visées « utilitaires », sociales ou identitaires.* *« Associationniste », structurée* *Rapport formation intra/externes* *Cohérence avec la culture de l'entreprise* *Visées « intégratives » ou plus distanciées* *Effets « identitaires »* *Satisfaction*
2. *Citoyenneté dans l'entreprise* : Quelles sont les relations entre la politique de formation et l'idée de citoyenneté au sein de l'entreprise ?	2.1 - Références à la citoyenneté au sein de l'entreprise 2.2 - Structure de l'organisation 2.3 - Statuts des personnels 2.4 - Information sur la politique de formation 2.5 - Choix de formation (systèmes de bourses individuelles?) 2.6 - Elaboration de la politique de formation 2.7 - Accès à la formation 2.8 - Effets « citoyenneté » des formations suivies : sur la fonction, le rapport à l'entreprise, les relations professionnelles 2.9 - Evaluation.	*Existence* *Favorisante* *Egalité de droits* *Qualité, accessibilité, satisfaction des usagers* *Autonomie, évolution des parts intra/extra du PF* *Implication, association* *Egalité d'accès* *Implication dans la vie de l'entreprise par la formation* *Prise en compte des avis des personnels*
3. Réseaux professionnels En quoi la politique de formation favorise-t-elle un développement des compétences des professionnels, qui s'inscrivent dans des réseaux internes et extérieurs à l'entreprise ?	3.1 - Initiatives de formation suivies dans des réseaux de métier ou de spécialités 3.2 - Motivations à se former 3.3 - Ouverture de la politique de formation de l'entreprise 3.4 - Apports et effets des formations suivies dans des réseaux professionnels	*Existence, intérêt des bénéficiaires* *Recherche d'ouverture professionnelles externes* *Reconnaissance interne* *Spécificité (réseau)*
4. *Pilotage des politiques de formation* : En quoi l'évaluation est elle un moyen utilisé pour conduire et faire évoluer la politique de formation ?	4.1 - Modes de construction du projet de formation des personnels repérés 4.2 - Modes de prise en compte des demandes de formation 4.3 - Perception de l'organisation du recueil de la demande de formation 4.4 - Formes dominantes d'évaluation/bilan 4.5 - Résultats de la politique de formation 4.6 - Produits des évaluations obtenus 4.7 - Usages des résultats produits par les outils d'évaluation 4.8 - Perception des formes d'évaluation.	*Diversité (co-évaluation, auto-évaluation, suggestion externe)* *Diversité (personnalisée, globale, appel à l'initiative/autonomie)* *Satisfaction* *Priorités de l'entreprise dans l'évaluation : quantitatif/qualitatif* *Efficacité : maîtrise effective des choix* *Conformité aux catégories des plans de F* *Degrés de formalisation et d'opérationnalité des résultats obtenus* *Effectivité de l'utilisation des résultats* *Satisfaction, utilité perçue*

Work process knowledge in the context of socio-technical innovation

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1 Introduction

The nature and organisation of work is changing remarkably. Organisations are having to acquire greater flexibility and introduce new technologies and new production concepts in response to the pressures of competition. Innovation is needed to sustain and create new jobs. The first part of this chapter comprises approaches towards innovation based on an European research & development - project. It was the project "Human Centred CIM Systems" - funded by the ESPRIT-Programme of the European Union - where partners from Denmark, Germany and the United Kingdom tried to establish an interdisciplinary way regarding the development of computer-aided production systems (Corbett et al. 1991). As a background for the development of technical systems the organisational concept of island production was used.

In the demonstration phase of the project different groups of skilled workers and apprentices were trained and worked in a production island for a period of one week (Blumenstein & Fischer 1991). Results of this investigation will be discussed in the second part of this chapter sheding also some light on other empirical studies from Germany (focussing on real-world environments) on skilled work in production islands.

In the changing world of work, training for job skills is a crucial part of economic strategy. Yet the mental and physical processes involved in work often embrace more than is readily apparent. Training for skilled work requires both the formal transmission of knowledge and an appreciation of experience at work. In the third part of this chapter conclusions will be drawn about the nature of the work process knowledge skilled workers have acquired and have to acquire in order to cope with new work tasks and and new production concepts. Understanding work involves a fundamental consideration of cognitive processes and organisational factors involved in knowing and action. This chapter will provide an in-depth introduction to this area.

2 New work tasks and skill requirements

Concepts and components of computer-aided and computer-integrated manufacturing in a plant often aim for a complete and detailed planning and operation of all plant

activities within a central operational planning and decision unit. The consequences for the employees in shop floor and administration are foreseeable. Work tasks are cut down that predefined detailed operation steps are followed and executed. The consequences of a such strategy is not only given by, that the workers hardly have the opportunity to incorporate their qualifications - in particular their work process knowledge - into the manufacturing process. Qualifications gained once decrease in the long run, because such workplaces do not offer the opportunity, to gain new knowledge while working.

An alternative to a "Tayloristic design" of work organisation is constituted by the design of partial-autonomous island production with its benefit, that the shop floor competence is preserved and supported. The manufacturing and organisational concept of composing part families should contribute to this, that the complete processing of an order - depending on complexity of manufacture at least up to the assembly level - can be executed within a production island. Such a complete working covers several production and handling processes such as turning and milling, moving, assembling and so on. It also includes work preparing tasks such as planning and disposing (see fig. 1).

This model of the authority allocation including its data processing implementation is labelled as relative or controlled autonomy. It is based on the thought that the desired responsibility for order processing on the shop floor level also requires a flexible authority, within which independent decisions can be made on the character and way of planning and processing an order. However, the model of controlled autonomy is in itself an contradictory construct, as the name already says: The autonomy of the island team lasts so far and for so long as the work results of the island meet the requirements of management. For this, especially what the duration of working processes concerns, there is no objective and therefore, no everlasting fixed measurement. As far as that goes the co-operation of the island with higher manufacturing departments includes negotiation processes, in which contradictory interests are brought forward and may led into possible compromises in planning and execution of work tasks. Such a production concept holds a task division for skilled workers, which diverses in many ways from the tasks in processes of intense work-division organised manufacturing.

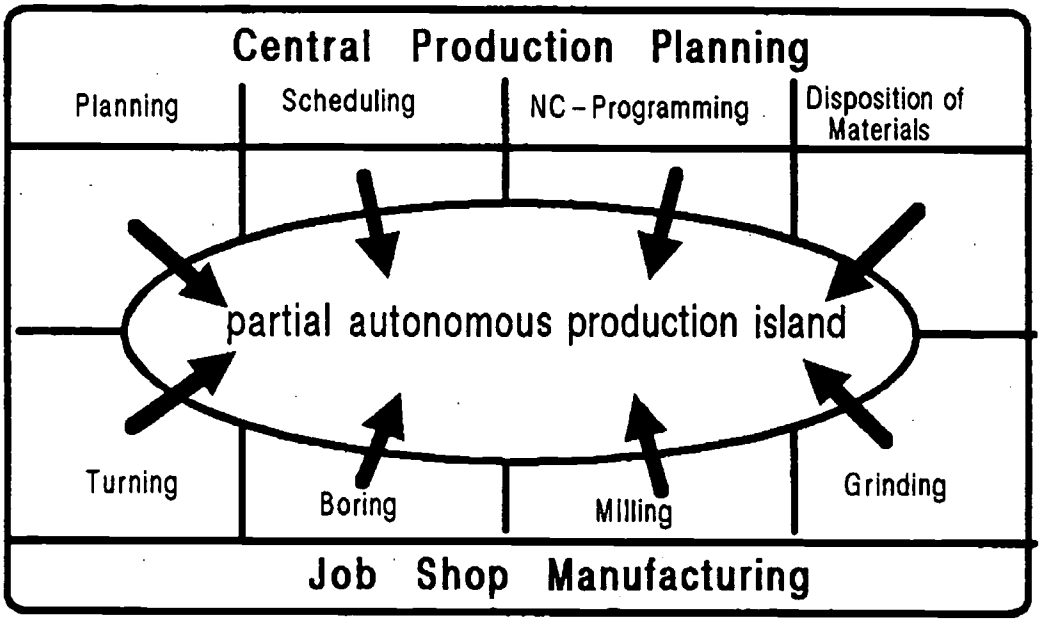

Figure 1: Partial-autonomous production island

Not only qualified co-operation between the island staff and other departments with order processing (e.g. design department, stock management, financial departments etc.) is needed here - which nevertheless includes that the island workers know the tasks and functions of the stages which are included during an order run in the plant. Such a concept also needs the explicit articulation of personal and group-related interest e.g. with regard to the time-budgets and the staff combination of the island as well as to take use of training and further education. Different as in Tayloristic organised production, where because of that non - responsibility for organisation of own work a "secret" work organisation is put in operation (Thomas 1964), flexible authority of the island makes the removing and the rejecting of responsibility more complicated. Once agreements with the central production planning via schedule and modalities of an order processing are set, the personal needs of the island employees (recovery and qualification needs, work hours and payment etc.) have to be included. This means, that in the area of the work planning and of work organisation the appraisal, explanation and articulation of personal and group-related needs and interest, which should or must be contained in planning, belongs to the occupational competence [Fachkompetenz] of skilled workers.

The presented production concept sets a flexibility in which the organisation of island internal order processing and furthermore the order-related co-operation with other departments has to be carried out. This contains a set of individual work tasks for the

island employee, that to reach for the planning of the work activities within the island to control of the work results. The core of this task division is - referring to the entire island team - the conjunction of planning, manufacturing, controlling and maintenance tasks for complete work acting, what the production of a (partial) product concerns. Even if the qualification of the individual employees does not include total qualification of the island personnel, this task division means - seen in a temporal developing perspective - also a reintegration of skilled work for the individual employee. This means, the conjunction of work activities which are vertical and horizontal separated by the Tayloristic organisation of work processes.

In horizontal respect, skilled labour tasks were separated into primary (machine operation, assembling) and secondary task areas of production (maintenance, quality control). The move towards serving of direct and indirect manufacturing tasks by the same island employee contains with it the operation and programming of different machinery and devices (such as robots, milling and turning machines). The inclusion of conventional machine tools is still possible (from efficiency as well as for qualification related considerations) as an option. This option encloses the ability to use machine tools alternatively manual or by programming the respective machine. Maintenance tasks should as far as possible also be carried out by island workers. This at least contains inspections and fit as well as slighter repairs. The performing of a such integrated work tasks covers the flow of materials (transport, machine charging) up to assembling the manufactured or bought sections to a (partial) product including its qualities fair delivery (quality control).

Not only in horizontal respect, the island concept means a conjunction of work tasks for skilled workers. The vertical division of labour and therefore the operational hierarchy is also affected. Production preparing tasks, which had been removed from the workshop and which had been migrated to higher levels like production planning or production management, are now again integrated into the task range of skilled workers. This essentially concerns tasks of detailed planning where planning contains both the operational and the temporal dimension:

- The work planning (operations planning) incorporates planning the individual operation steps within the island (e.g.: Stock requisition, transportation of the semi-finished product, clamping the workpiece, milling cutters, bevelling, assembling, checking) including the generation of the respective detailed routes (e.g. controller programmes for manipulation and transports facilities, clamping plans, NC programs, assembly drawings, statements for quality control).
- The time-related work scheduling contains the temporal agreement of the individual operation steps and procedures - both onto the individual order and onto the entire

order pool of the island. This includes the definition of processing times per working process, the time related allocation of the working process to workplaces, the test and initiation of on-time availability of qualified personnel as well as machinery, tools and material and finally the optimisation of the machine allocation plan developed in this way with regard to on-time supply of all island orders.

Considerable for the execution of these tasks is the close linking of planning to work tasks of direct manufacturing. The work process knowledge of skilled workers via the respective specific features of persons, machinery, material and tools should be integrated into planning. Therefore, decision-making skills are expected from the skilled workers in the island with respect to production-relevant events affecting quality and deadline aims. Some events on the shop flour level are regarded as "unforseen events" (simple because workshop specific features such as "flaws" of specific machinery are unknown to the central planning department) and disturb planning or in the result reduce it even to absurdity. They are made plannable at all by island production. At other events - which in actual fact in the island itself are also not foreseeable (such as sudden machine breakdown) - the island worker should counteract faster and more adequately than this is possible from a central production planning. Just the appropriate response to failures now requires not only judging and decisions concerning pre-set aims but also tasks of aim setting: New goals for manufacturing must be developed in which different requests of production economic and time economic type (machine workload, set-up time minimisation, compliance with the delivery dates etc.) are regarded.

Up to now work tasks and requirements which result from an ideal concept of island production were represented (summarised in fig. 2). Empirical surveys on skilled work in production islands were accomplished by industrial sociological research institutes in Germany. However, the core of these analyses was not to determine contents-related work requirements. Rather, the spread of production islands was in the foreground - nevertheless 30% of the German mechanical engineering manufacturer state to have changed their work organisation according to the production island principle (Hauptmanns 1997: p. 19). Another focus of industrial sociological research was on the work load and strains of the island workers (Moldaschl 1994). As far as those surveys do give information on it, the qualification relevant facts determined by me can be verified as *trends*. However, the range of variations during the operational introduction of production islands is exceptionally great. Group-technological concepts (according to the principle of the partial families) are from time to time indeed introduced, however, refrain from the introduction of teamwork with the mentioned work organisational consequences. The fewest manufacturer empower a great flexibility of self organisation

and self control for the island workers. Most manufacturers reduce Tayloristic work division of labour without completely neutralising it. A characteristic model of this type of work organisation is the establishing of production islands in which a master [Meister] incorporates tasks of planning and stuff conducting while the skilled workers work with first priority in the range of machine operation (Moldaschl & Schmierl 1994: p. 75). Therefore, protagonists of the production island principle label the reduction of Tayloristic work organisation in German companies as half-hearted (Brödner 1998: p. 34).

The external cooperation between the production island and other units of the company
The internal co-operation in the production island
The horizontal integration of work tasks
The vertical integration of work tasks
The integration of work and learning
The implementation of planning systems, i.e. components of computer-aided production management (CAPM)

Figure 2: Competence-related issues of island production in difference to a Tayloristic organisation

2 Existing work process knowledge of experienced workers

New production concepts such as the concept of island production bet on decentralised planning and decision powers in the workshop. Nevertheless how react skilled workers and apprentices, if they are confronted with such requirements? Which experiences can they incorporate into such tasks?

We analysed these issues in a non-representative survey with skilled workers and apprentices (see in detail: Fischer 1995). First interested us: What do skilled workers and apprentices know about the planning and organisation of an order processing and therefore, broadly speaking, about the operational set-up and workflow organisation? Does the skilled workers specific competence, the work process knowledge of the shop

flour, also concern planning and control processes?

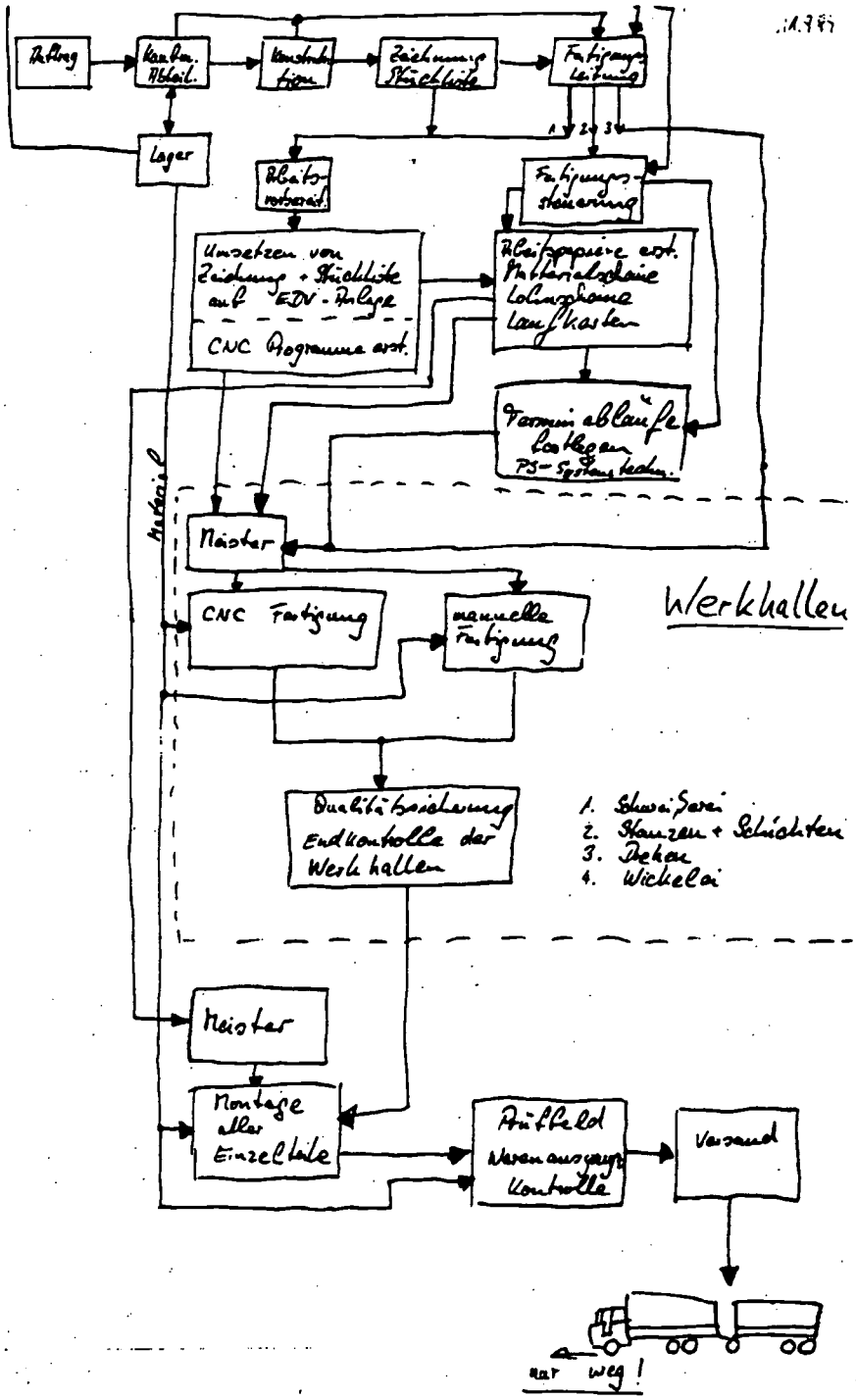

Figure 3: Work organisation in a skilled worker's view

We presumed that this issue is by no means answered with the formal qualification. Because neither in the primary vocational education nor in further training were up to now and to our knowledge issues of work organisation at appreciable volume a teaching subject (a solution for this: see Fischer & Stuber 1998). Therefore, we set up the task for the participants to draw a workplace in connection with the operational information and flow of materials as it is typical according to their previous work experience.

In many cases a very detailed overview about the organisation of an order processing was to be withdrawn from the sketches by the skilled workers (see fig. 3: Here it is described how an order [Auftrag] goes to the sales department [kaufm. Abteilung] and the design department [Konstruktion]. Then an engineerimg drawing [Zeichnung, Stückliste] is produced which goes to the head of the production department [Fertigungsleitung]. Process planning [Arbeitsvorbereitung) and production control [Fertigungsteuerung] are responsible for converting the engineering drawing and the parts list into the computer system [Umsetzen von Zeichnung und Stückliste auf EDV-Anlage]) and for producing employee papers [Arbeitspapiere, Materialscheine, Lohnscheine, Laufkarten]. So the work flow planning [Terminabläufe] ist determined. In the factory buildings [Werkhallen] the product is produced with CNC-machines [CNC Fertigung] and manually [manuelle Fertigung]. After that quality assurance and final inspection takes place [Qualitätssichering, Endkontrolle]. A foreman [Meister] is resonsible for the assembly of all parts befoe the product goes to the inspection [Prüffeld] and distribution department [Versand]).

Through these sketches, an essential content of work process knowledge of skilled workers becomes clear. The "knowledge as one organises production" - a participant called it the essence of his experience and an aim to be striven for at vocational and further education. This knowledge was to a considerable degree present by experienced skilled workers. Not only in sense that the participant could name the internal stations of an order processing. They also knew which particular contributions in which order is given by the individual departments during manufacturing of a product. Therefore, the preciseness and the immanent validity of the represented order processing normally rose in relation to work experience of the participating skilled workers.

What is thereby especially interesting: Officially the skilled labour in the most cases had to do nothing at all with the planning of an order processing. That was normally a matter of production planning. Their knowledge about planning and organisation of production had been gained in informal situations - in situations, where a spontaneous and intensive co-operation with other departments becomes again and again necessary

on account of problem situations (unforseen events, interference in production). The variety of informal, not only work related but also everyday life issues within the plant will often be overlooked if new production concepts of an exclusively technical or system theoretical perspective are considered.

What the participants of our survey concerns, both, the formal and the informal work organisation, was based on their work experience as well as on their professional self-conception. A polarisation of planning and decision responsibilities at production preparation areas was shown in many sketches. That was to some extent scornfully annotated as "operational overhead". However, most participants seem to have themselves arranged with the existence of production management and production planning. In spite of the verbal refusal of the strongly work-dividing organised work, felt as typical by them, the skilled workers did not immediately and unreservedly greeted the alternative model of the production island introduced by us. In opposite: During the entire survey the new production concept was checked mistrustfully.

Different positions crystallised to the concept of island production - such ones which extended from refusal via conditional approval up to unconditional advocation. It was a common viewpoint of all positions that specific aspects of the previous work experience were brought in touch with the concept of island production. These aspects were partially correct and important for the discussion of the new production concept. However, some participants were bonded to their previous experience so strongly that an unprejudiced testing of the work tasks was just not possible for them.

The importance of experience during the classification of new production concepts through the affected skilled workers becomes clear through the following example: An older and very experienced skilled worker expressed himself disparagingly about the continual necessity of organising at island production, when the island workers for example have constantly to deal with material, equipment and tool availability: "I would not work at such a sloppy company!"

The same survey participant reported shortly before during the discussion of own experiences with the work organisation positively about his intensive co-operation with other departments, for example the design department, - remember this concerns unforseen events. It now appeared to him that with island production the unforseen event, the emergency, would become the normal case - and that contained the practice of activities as e.g. material purchase order and procurement, those he did not consider as associated with skilled production work.

The activities depending on an order processing are by no means recognised by skilled workers as neutral. The previous experience with the enveloped operational hierarchy

and division of labour is essential here: There are tasks which are classified as more of high quality or as inferior; there are tasks which are rejected or accepted as occupation extrinsical or occupation typical.

Experience exists, that becomes clear here, not only in naive sensorial perception. The work experience of skilled workers is closely connected with evaluation of political and personal social phenomena (Fischer 1996). Latter can also be withdrawn from such positions, that received during the survey strict refusal or unreserved approval for island concept and planning software. The unconditionally positive comments partially existed that the introduced island conception was moved to the land of fiction: In such a way, the summary of a participant - "the skilled worker as a island king" - assumes that skilled workers automatically receive a professional rise in island production, since they perform tasks of the planning and operation, which were formerly performed by the management.

Strict rejecting comments were explained with the unsuitability and redundancy of "computerisation". Here, experience had an essential role to play that professional knowledge and ability can partially be devaluated by computer use. That professional knowledge and ability can be promoted and revalued, with the aid of computer use (as it is in the concept of island production at least formulated as a claim), was outside of the experience and thinking horizon of this participant.

Totally seen during the run of survey the major opinion represented by the skilled worker was, that a stronger self organisation of work might certainly be desirable within the framework of an island production. However, this would have to be linked to conditions, that reach from the wage issues via the backup of autonomous decisions up to influence at stuff decisions of the island team.

3 Work analysis and vocational training based on the concept of work process knowledge

In the survey it became clear, that experienced skilled workers do have partially extensive and detailed knowledge, what planning of production sequences concerns - an essential requirement for working in production islands. This work process knowledge is in Tayloristic organised concepts hardly recognised nor honoured. However, the survey also showed that in spite of this work process knowledge the work requirements of a production island can by no means be met naturally. In particular in the context of the diverse co-operation requirements, it became clear that co-operative work is new to

German skilled workers. No miracle: Except for exceptions, co-operation is in the company as well as in vocational education at best in Sunday speeches an appreciable topic. Furthermore, the survey manifested that experience can also lead to unquestioned barriers to new tasks.

When Wilfried Kruse introduced the term "work process knowledge" in 1985 he was pointing at that kind of knowledge that belongs to experienced workers and that refers to all conditions relevant for an order processing within a company (cf. Kruse 1985, 1986). What was the reason for emphasising the necessity of work process knowledge? On one hand it was an insight into changing working practices in different industries - computerisation as well as new occupational profiles had become important matters of discussion. On the other hand Kruse's attempt has to be understood on the background of a specific approach in the area of qualification research which was guided by the objective to adapt people to rather narrow occupational profiles created in a Taylorist tradition. In contradiction to this approach Kruse postulated that a kind of knowledge is required - and will be even more in the future - that does not only refer to isolated atoms of work behavior but to the work process as a whole and combines theoretical as well as practical knowledge.

In fact, Kruse did not introduce the term work process knowledge, his own translation of the German word "Arbeitsprozesswissen" was "*labour* process knowledge". The English word "labour" gives us a first hint about what is included in the meaning of work process knowledge. We are exploring knowledge about how to solve concrete work tasks as well as knowledge about a social relationship the solving of concrete tasks is embedded in.

In this respect the specific content of professional knowledge stands in question. It may sound surprising but so far - on a scientific level - the specific content of professional knowledge has been seen as of minor importance. In cognitive psychology the acquisition and application of knowledge was identified with finding and applying rather abstract rules and procedures of information processing. In Germany it was 1987 when voices in cognitive psychology appeared who stated that problem solving is not "uninfluenced", as Neber (1987, p. 32) said, by the content of the knowledge which the problem-solving person has acquired. Other authors argue that the classical distinction between declarative and procedural knowledge which had for many years played an important role within cognitive psychology does not adaeqately account for work-related knowledge (cf. Samurcay 1994).

This lack of acknowledgement of work-related contents of professional competence was not only true for psychological approaches. In industrial sociology research was

also not mainly focussed on work contents. The content of knowledge was more or less seen as a question of the (changing) level of workers' qualifications, of deskilling or upskilling (cf. Braverman 1977; Kern & Schumann 1984). Even the sciences of Vocational Education and training (VET) have neglected this dimension to a high degee: contents of knowledge learning persons have to acquire are traditionally derived from academic disciplines, in the field of technical education and training from the engineering sciences (cf. Bannwitz & Rauner 1993).

Within VET an orientation towards worker specific knowledge and skills was demanded (Pahl & Rauner 1998). For this reason the term "work process knowledge" represents a change in perspective for VET. Several universities in Germany have begun to establish a science of VET in its own right not only with respect to didactical issues but also concerning the content of learning. Focussing on work process knowledge as one core of VET science has also reinforced research activities which formerly concentrated more or less on didactical questions and teaching environments.

It is worth noting that nowadays the specific content and quality of work process knowledge is not only taken into account by the VET researchers but also by psychological approaches. Today we discover a movement in psychological research which may not be considered as mainstream psychology but represents a growing area of scientific interest: away from postulating general rules and procedures of knowledge acquisition and application towards investigating specific contents of knowledge in different domains (cf. Gruber 1994, p. 47).

However, all these movements are still built on the basic assumptiom that it is *knowledge* which is guiding our actions. This assumption was recently questioned by Georg Hans Neuweg (1998) in a paper which attracted some attention in German academia related to Vocational Education and Training. Neuweg referred to arguments which had been originally developed by Gilbert Ryle in the late 1940s.

Long before the so-called "tacit knowledge" debate (cf. Polanyi 1966) took place and possibilities and limitations of artificial intelligence were controversially discussed (cf. Dreyfus 1985, Dreyfus & Dreyfus 1987) Ryle had analyzed the relations and differences between knowing that and knowing how (Ryle 1949, p. 28). He criticised what he called the "intellectualist legend" (ibid., p. 31) - it was the assumption that successful practice is characterised by a preceding act of theorising.

> "The crucial objection to the intellectualist legend is this. The consideration of propositions is itself an operation the execution of which can be more or less intelligent, less or more stupid. But if, for any operation to be intelligently executed, a prior theoretical operation had first to be performed and performed

> intelligently, it would be a logical impossibility for anyone ever to break into the circle. (ibid., p. 31)

Indeed there are some arguments developed by Ryle and others which have to be considered within the work process knowledge approach as at least some importance of the term "knowledge" is indicated here.

First of all the fact has to be taken into account that rather obviously a certain class of actions is not guided by preceding conscious thinking, by applying rules which are verbalised etc.

A good example for the absurdity of always applying theories before effectively doing something stems from Polanyi (1958) discussed by Miller, Galanter and Pribram (1973, S. 86). It is about the theory of keeping the balance while riding a bycicle. This theory can be expressed as a rule: "Get the curve of your bycicle track in relation to the square root of your imbalance devided through the square number of your speed."

As it can be assumed that the vast majority of bycicle drivers does not even know this rule it is obvious that nobody applies this rule in the sense of a preceding mental operation. Moreover, it might even be dangerous if somebody would try to do so. Nicholas Boreham (1994) has drawn our attention on "the dangerous practice of thinking". He argues that professional competence is based on complex interactions between explicit and implicit memory systems and the whole system might become unbalanced when a person tries to influence the part of the system accessible for consciousness while acting.

However, Ryle's argument is built on the presumption that action cannot be guided *at all* by knowledge. Ryle supposes that knowledge relevant for acting can only be *reconstructed* and the acting person is merely able to reconstruct his or her knowledge like a third person could. Indeed, if knowledge is merely regarded as another kind of action - as action on a higher level - this assumption leads to an infinite regress: Every action needs another action that had to be planned ahead. The fundamental viewpoint - the acknowledgement of thinking as an *operation* on a higher level and therefore as preceding *action* - is accepted by Ryle and is a common belief within modern psychology, especially in activity theory. Whereas protagonists of activity theory build models on this assumption (i.e. how actions are "regulated" by actions on a higher level) Ryle builds his critique on this assumption saying that the idea of "regulating" actions by preceding actions must be wrong because it would lead to an infinite regress.

A solution to this problem could be based on the idea that it might not be sufficient to describe thinking as an operation (on a high level) which as a sort of follow-up effect leads to acting as an operation on a lower level. This idea was introduced by the

German philosopher Hegel who postulated a dialectical relationship between knowledge and action instead of a consecutive relation. In 20th century psychology this idea was pursued by theorists of "Gestalt psychology" as well as by some researchers who were standing in the tradition of Piaget, especially Hans Aebli (cf. 1980/1981, 1984).

A dialectical relation between knowledge and action would imply that, firstly and in difference to Ryle, *there is* a relation between knowledge and action but secondly not a sequenzing of before hand fixed operations. Rather a mutual relationship has to be assumed which means that knowledge serves as foil for acting but does not determine acting. The "ingredients" of this foil are activated according to the current events and situations the acting person is in and usually the kind of acting itself has some implications for the question which of these ingredients a purely perceived by the senses, which are memorised, which are verbalised etc. Riding a bycicle can be successfully done without consciously applying verbalised rules whereas it must be doubted that anybody is solving differential equations out of the sphere of signs and symbols.

To propose a dialectical relationship between knowledge and action would imply, on the other hand, that acting (potentially, not necessarily) can enrich knowledge. This conception has been confirmed by several empirical investigations in Germany in the recent years which have conceptualised the role of experience in the work process (Martin 1995).

On the basis of our research in different sectors (Fischer 2000) we can conclude that neither work experience alone nor a derivative from academic knowledge leads to skilled work activity. The work process knowledge of skilled workers is differentiated from the construction and design knowledge of engineers, but still goes far beyond the simple "handling knowledge" within routine jobs. It does not just involve knowledge about the execution of a single task, but rather knowledge about how the various sections of the work are connected in the context of the company. Such knowledge transmits the connection between conceptual models of work organisation and the life-world inside organisations, between artifacts built on an engineering basis and their actual peculiarities in the production process.

Vital aspects of this knowledge about the context of the industrial sector include:

- how the company works; this includes work processes within the framework of a company's work organisation;
- the specific peculiarities of material and equipment ("Every machine has its own manias!" - (Fischer et al. 1995));
- the special aspects of mechanical, energy and chemical processes;

- the concrete consequences that can derive from specific actions.

From this type of knowledge

- the specific feature of the materials, plant and equipment used in the company;
- the "internal" features inherent to the mechanical, energy, chemical and computer processes

can be considered as two extremes of a continuum of knowledge and action. The latter extreme - representing the characteristics of the mechanical, energy, chemical and computer processes - is the key part of engineering knowledge and skills. It also represents what is traditionally taught in vocational schools: the general principles applied to technical equipment and processes.

The other extreme, concerning knowledge and the consideration of the specific characteristics of the materials and installations used in the factory, is the strong point of work process knowledge. It represents what is seldom taught in vocational schools and in-company training, and can be acquired exclusively by learning in the work process.

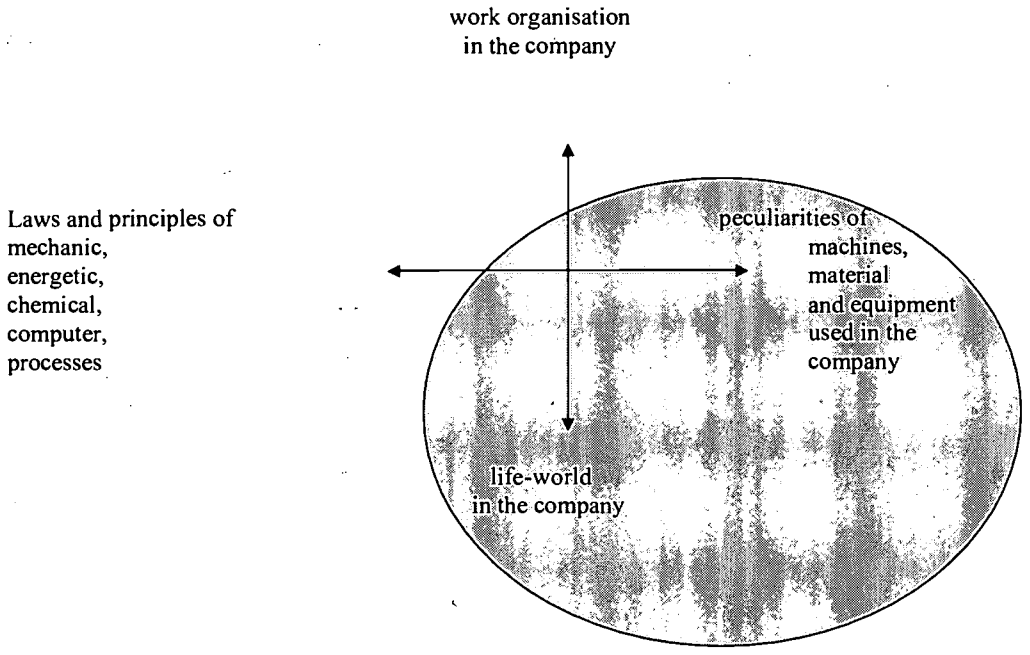

Fig. 4: Objects of work process knowledge within skilled maintenance and production work

Naturally, the two aspects cannot be considered as totally independent from another. We cannot deny that the general principles of technical and natural sciences are applied in computerised production installations, and that they therefore operate in the specific local plants. However, in the ordinary, regular operation of machinery these principles

are visible only to a limited extent, they are closed in "black boxes". This is one reason why many skilled workers have a partly incomplete or even incorrect concept of the internal technical processes and the operational principles. In the regular production process it is usually not even necessary to to have developed such a kind of knowledge, but this situation changes immediately when machine breakdowns occur or unforeseen events happen. Then, a mental reconstruction of technical and organisational principles may be required.

In this situation it is difficult for the individual worker to develop work process knowledge without any support. Conclusions have to be drawn in order to:

- relate school knowledge much better to the knowledge which is really needed at the workplace,
- establish workplace learning not only as a demand on workers (combined with stress and pressure) but as a opportunity for personal development,
- design technical artifacts with regard to user-specific ways of working and in cooperation with future users (Ehn 1985; Fischer et al. 1996).

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'I couldn't wait for the day': **Young Workers' Reflections on Education during the Transition to Work in the 1960s.**

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Abstract: The school and labour market experiences of young workers are a major concern for both academics and policy makers alike. This concern has generated a great deal of research reflecting a wide range of debates around the transition from school to work. One of the first research projects to consider this process was undertaken in the early 1960s by researchers at the University of Leicester, led by Norbert Elias. The data was collected via interviews and whilst 910 interviews were completed, the data was not fully analysed or published. Recently, 866 of the interview schedules have been discovered and an initial analysis suggests that the data provides a significant insight into the transition from education to work in 1960s. This paper aims to present some of this data for the first time, exploring young workers' reflections on education, their transitions to work and experiences of workplace learning.

1. Introduction

The process through which young people make the transition from school to work has been a focus for youth studies and the sociology of youth since the early 1960s. Indeed, some of the early works on youth tended to focus almost exclusively on the transition process (see for example Wilson 1957; Carter 1962, 1963, 1969; Douglas 1964; Watts 1967). However, despite the early focus on youth transitions such studies remained fairly scarce. It was not until the early to mid 1970s, when youth unemployment and the decreasing employment opportunities for young people became issues, that more attention was given to the problem of youth (both in terms of transitions and more generally) (see Blackler 1970; Morrison and MacIntyre 1971; Bazalgette 1975; Ashton and Field 1976). During the 1970s the larger companies either stopped employing large numbers of school leavers or became involved with government youth training schemes (Fuller and Unwin 1998). The research focus at this time shifted to issues around the growth of youth unemployment and the impact of the associated government training schemes. As Roberts (1995:23) has highlighted '...the scarcer young people's employment opportunities have become the more attention has been paid to their preparation and eventual entry into the labour market'. However, such issues have perhaps led to an over concentration of transitions. Indeed, in more recent times the over concentration on youth transitions has led Cohen and Ainley (2000) to suggest that

> The youth as transition approach not only implies a linear teleological model of psychological development, it is premised upon the availability of waged labour as the 'ultimate goal'. The consequent emphasis on production has led to a limited research paradigm focused on 'transition' as a rite of passage between the states of psychological maturity and immaturity... (Cohen and Ainley, 2000: 80)

However, despite Cohen and Ainley's (2000) welcome assertion that youth studies should move beyond the traditional 'narrow empiricism' of youth transitions and look to the new generation of empirical studies that explore youth as a complex mix of social, psychological, economic, cultural and political processes, the interest in youth transitions *per se* remains both in terms of explorations of current transitions (Ahier *et al* 2000; Johnston *et al* 2000; Canny 2001; Kelly and Kenway 2001; Ryan 2001) of 'historical' or past transitions (Fuller and Unwin 2001; Vickerstaff 2001) or generational differences (Strathdee 2001). Indeed the value of such historical accounts of transition is emphasised by Vickerstaff (2001) who suggests that by looking back at the transition process it becomes possible to question the orthodoxy of the early (and current) accounts. For example, Vickerstaff argues that many of the earlier studies on youth transitions were based on the assumption that the 1940s, 1950s and 1960s were a 'golden age' where transition from school to work was simple, linear and 'single step'. However by interviewing respondents who were apprentices between 1940 and 1980 she has been able to demonstrate that transitions were anything but comfortable or unproblematic (Vickerstaff 2001: 3). Likewise, Fuller and Unwin (2001), via an analysis of narratives from past apprentices, have explored the role that the transition to apprenticeship played in the formation of occupational identity and demonstrated how this had implications for community identity in a way the Modern Apprenticeship never will.

The value of studies such as Fuller and Unwin (2001) and Vickerstaff (2001) resides in the fact that they are able to explore contemporary debates and test received wisdom on transitions by getting their respondents to reflect on past work experiences. Obviously such approaches are not without limitations, such as the problem of memory and the notion that the past always looks 'rosier'. However, it is our assertion here that it is still possible to learn so much about the transition process by re-examining data from long completed projects or from life and work narratives. The luxury of time also allows us to re-explore this data mindful of the concerns of authors such as Cohen and Ainley (2000).

The remainder of this paper is organised into four sections. After the introduction a brief discussion of two important texts is offered, Carter (1962) and Ashton and Field (1976). In these texts particular attention is paid to the way they explored and accounted for their respondents attitudes to and experiences of school and the respodents perceptions and expectations of paid employment. In the next section, using data from 500 respondents from the little known '*Adjustment of Young Workers to Work Situations and Adult Roles*' project carried ot at the University of Leciester in the early 1960s, we re-examine elements of the transition from school to work process. We aim to explore young workers reflections on education before moving on to re-analyse some of the data relating the individuals perceptions and expectations of paid employment. We also reflect breifly on the respondents views on what it meant to be an adult. In the final section we draw some conclusions and reflect on possible implications for contemporary debates.

2. Themes and Debates

As suggested, above there were a number of key texts from the mid to late 1960s which explored the transition from school to work (although relatively it was still an under researched area at that time). We wanted to explore our data in terms of the themes and issues that were being presented as important at the time. Carter (1963) produced one of the early definitive works on school to work transition as part of the Department of Scientific and Industrial Research (D.S.I.R) sponsored project '*Home, School and Work*'. Carter (1963) carried out interviews with 100 boys and 100 girls who left secondary modern schools in Sheffield at Easter and Midsummer 1959. Each respondent was interviewed three times at various stages of the transition process. From these interviews Carter (1963) was able to reflect on and explore a number of research areas including attitudes towards school and the early experiences of work. One of the other few pieces of research into the school to work transition during the 1960s and 1970s was the key publication '*Young Workers: The Transition From School to Work*' by Ashton and Field (1976). Using data on youth transitions in Leicester, the Ashton and Field (1976) text is significant in terms of the overall aims of this project as it actually supplemented data collected in the 1970s with a small number of the interviews from the Norbert Elias led '*Adjustment of Young Workers to Work Situations and Adult Roles*' project used here (see below). As such their data says as much about youth transitions in the 1960s as it does the 1970s.

Carter 1963

In terms of attitudes to school and leaving school, Carter (1963) provides a rich and detailed discussion, clearly documenting the young peoples' school experience. For example, according to Carter (1963) over half the boys and girls in the research liked school and some enjoyed it a great deal suggesting that it was an alternative to the boredom of home. The remainder of respondents reportedly held mixed feelings about school with some attending only because it was compulsory. Carter (1963) reports that many children spent a considerable amount of time at school in a 'state of boredom', although some of the children found the lessons enjoyable and thought education was a good thing (Carter 1963: 21). Some children in this study felt that they were being held back and that the lessons were too simple or that was not enough for the children to do. However, he argues that irrespective of the children's attitudes towards, or experiences of school.

> ...the majority of children were looking forward, some already with great excitement, to starting work. Three-quarters of the boys and girls were glad they would soon be a worker – independent, recognised as grown-up, no longer schoolkids. (Carter 1963: 23)

Despite the majority of those in Carter's (1963) study being keen to start work, there were those who were apprehensive and anxious about the world beyond school. However, regardless of their initial feelings and whilst the majority were not 'shocked' by the transition process, one year after leaving school most of the children 'had discovered that work was not all that it was cracked up to be: but the status of the worker...was

no less cherished' (Carter 1963: 23). Carter (1963) also reports that work was not quite what the children had expected. Although it was still largely boring, the employers were less strict than the teachers and, Carter (1963) argues, work gave the children dignity and freedom not available at school. According to Carter (1963)

> One aspect which impressed many children was the free atmosphere at work. People could walk about and talk, and chew and sing and smoke...Unofficial privileges and tolerance in such matters as time for clocking in and the length of tea breaks were a pleasant surprise to children who recalled warnings about the toughness of the world of work. (Carter 1963: 93)

However, some of the earlier expectations about work, in particular the expectations that it would make the children more adult were not always realised and he argued that adjustment to work was made more problematic by the insignificance and marginal nature of some of the children's work roles. As an example, Carter (1963) cites shop assistants who were made to feel insignificant as they were not allowed to do anything alone and when giving change they had to check first with the supervisor. Although still perceived as children, some of the respondents did feel older and that there had been changes to their lives, but as Carter (1963) points out just as many still persisted in children's leisure pursuits.

Another defining feature of adulthood, which the children in this study looked forward to, was the independence that earning money would provide. As Carter (1963) suggests, 'the wage was valued not just for what it enabled children to do, but for what it enabled them to be' (Carter 1963: 97). However, the experiences of earning money were also less clear cut and for many. Spending and the associated freedoms that spending (and earning) might give did not materialise in a way that was expected. In Carter's (1963) study the earnings that the young people obtained were, by and large, administered by their mothers and it was the mothers who decided how much 'spending money' the young workers were allowed. Although earning the money did provide some independence most had to plan their spending with great care.

Ashton and Field 1976

One of the definitive studies of youth transitions from the 1960s and 1970s was provided by Ashton and Field (1976). In their research on youth transitions in Leicester, Ashton & Field (1976) identified the three groups, central to understanding the transition process, as the Careerless, the Short-term Careers and the Extended Careers. They suggest that the three categories identify the different meanings attached to work by the young workers, reflecting their different experiences and self-image. For example, the careerless make the transition from the lower streams of state schools into semi-skilled and unskilled work without adjustment problems. Their concern was for the immediate present and little thought was given to the future (Ashton & Field 1976:36). They were employed in jobs that provided good short-term economic rewards but little chance of self-development. They frequently changed jobs, as both the boredom threshold and

commitment to the job were low. This group learnt to believe that they had limited ability at school and as such did not consider themselves to be suited to jobs requiring lengthy training.

In contrast, those with short-term careers were moderately successful at school, occupying a middle position between the careerless and the extended careers. On leaving school they went on to seek jobs in the skilled manual trades, technical occupations and clerical work. These jobs offered the possibility of development through training and also a degree of security, illustrating their greater concern with the future. When they began work they faced a lengthy period of training and/or further education often paid for by the employers. This group learnt complex job specific skills and tended to stay in the job until training was complete. They became 'locked into' the occupation and rarely envisaged a change in career once the skills were learnt. This group according to Ashton and Field, believed themselves to be of moderate intelligence and capable of further development. They chose jobs that provided them with the opportunity to 'make something of themselves'.

The third group identified as 'extended careers' generally had more middle class backgrounds. At school they had been aware of the link between academic success and entry to a good career. Their focus was more on long term rewards and their career paths, which offered continuous advancement and high and secure incomes, reflected this. Like the short term careers their pay was low in entering work and promotion depended upon further education and training. This group saw continuity between education and work and often had on the job training in addition to day release schemes. Their self-image was as intelligent individuals capable of considerable self-development. As such they embarked upon careers that required a long period of learning in order to progress and develop their potential skills. The long-term rewards were considerably greater for this group.

In each case, Ashton and Field argue that the positive or negative image the young workers acquired of themselves within the family was then reinforced at school. Their entry into work and early experience of it further reinforced the self-image and orientation to work generated at home and in school. Findings from later studies reached similar conclusions to those of Ashton and Field, stressing the impact of social class background on the school to work transition (Brown 1987; Furlong 1992; Furlong, and Cartmel 1997; Jenkins 1983; Willis 1977) and the ease with which young people managed the transition (Kiernan 1992; Bynner 1998).

Overall, the Carter (1963) and the Ashton and Field (1976) texts highlight a number of different themes. First, that the experiences of school and family life had an impact on young people's expectations of work. Second, that whilst school was largely boring it did provide some diversion from the 'greater' boredom of home life. Third, the majority of young people in both studies looked forward to leaving school and did not experience transition problems. However, work was not what they expected it to be. Fourth, many still

identified with their childhood roles and leisure pursuits. Finally, although earning money was important, the young workers still appeared to be dependant on the home and had little of their own money to spend on themselves.

3. Background and Methdology

The data for this paper is taken from a research project on the transition from school to work carried out by a team of researchers, led by Norbert Elias, at the University of Leicester in the early 1960s. The original research project was awarded a grant for £15,000 by the Department of Scientific and Industrial Research (D.S.I.R) in 1962. The aim of this little known 'Adjustment of Young Workers to Work Situations and Adult Roles' project was to explore how young people experienced work and adjusted their lives to the work role. Suggesting that much of the early research on young people was essentially 'adult centred', with adults trying to apply their norms and values to young people, Elias stated that this project was

> ...concerned with the problems which young male and female workers encounter during their adjustment to their work situation and their entry into the world of adults. When they go to work, or begin to train for work, young workers have to make a wider adjustment to a situation and to roles which are new to them, whose implications are often imperfectly understood by them and by the adults concerned, and for which they are in many cases not too well prepared. The project will differ from other studies in investigating this wider adjustment which young workers have to make in their relationships with older workers and supervisors in the factory or workshop; to the problems and to their role as workers; and to their roles as money earners in home relations and in their leisure time. The factors to be examined will include differences between age groups, between sexes, in size of organisation, in nature and status of job, and between young workers from working class and middle class home backgrounds. We intend to pay special attention to the overall characteristics of industrial societies responsible for the specific problems of adjustment for people in this age group. (Young Worker Project, Minutes of Fifth Meeting 18 April 1962, p.2)

From this position emerged five specific areas of enquiry – adjustment to relationships with older workers and supervisors; adjustment to job problems; adjustment to role as workers; adjustment to role as 'money-earner' in home relations; and adjustment to role as 'money-earner' in leisure time. The data was to be collected via interviews with a sample of young people drawn from the Youth Employment Office index of all Leicester school leavers from the summer and Christmas of 1960 and the summer and Christmas of 1962. The target group was to include all those with one years further education. This sample was then further stratified by the school attended (secondary, technical, grammar or other), by the size of firm entered in first job and whether they were trainees or not. The sample was divided up into five sub-groups and using a table of random numbers a target sample of 1150 young people were identified. The sub-groups were 'A' – boys

who had left school in summer or Christmas 1962, with less than one years further education (target sample of 330); 'B' – boys who had left school in summer or Christmas 1962, with more than one years further education (target sample of 160); 'C' – boys who had left school in summer or Christmas 1960, with less than one years further education (target sample of 300); 'D' - girls who had left school in summer or Christmas 1962, with less than one years further education (target sample of 200); and finally 'E' - girls who had left school in summer or Christmas 1960, with less than one years further education (target sample of 160). From the 1150 individuals, the research team were successful in contacting 987 of which 105 refused to be interviewed and 882 interviews were completed. The interview schedule was semi-structured but the responses tended to be open-ended, textual and reflective in nature. It contained a series of 82 questions in 5 sections (including Work, Family and Expenditure, Leisure, School and Work, and General). The interviewers were asked to write all answers to questions verbatim if possible and always in as full detail as the time and circumstances allowed. The interviewer was also asked to make a series of general comments at the end of the interview schedule giving the interviewers general impression from the interview, noting any problems connected with work, family or leisure. The fieldwork began in 1962 and ended in 1964.

At the start of the research in 1962 the researchers involved with the project were unaware that Elias had arranged to take up a Chair in Sociology at the University of Ghana from the October of that year. Although Elias attempted to direct the project remotely via a research committee, problems with working practice, academic direction and the researchers 'right' to publish emerged. By the time the fieldwork had ended, and 882 interviews plus a pilot study of 32 interviews had been completed, the research team had resigned and the project effectively ended. With the exception of Ashton and Field (1976) who used a sample of the cases, the bulk of the data was never analysed or published. In the mid 1970s Ashton archived the data, where it has remained untouched until recently when 866 of the original interview schedules were rediscovered. The value of this data for re-analysis is well made by Corti *et al* (1995)

> ...although huge resources have been devoted to qualitative interview, ethnographic, case and anthropological studies, the data are often inaccessible, untraceable or have been destroyed. (Corti, Foster and Thompson 1995: 1)

From the transcription and initial analysis of some of of the data, what becomes clear is that this project provides a fascinating insight into the qualitative experiences of the way young people experienced the transition from school to work in the 1960s. The research findings presented here are based on 500 of the original 866 interviews schedules. All of the interviews analysed to date were males, the majority of whom were aged 15 and who were in their first jobs. Around a hundred of the males were sixteen or over and twelve of the young workers were on their fourth or more job.

4. Intial Findings and Themes

The analysis of the data will focus on three, key emergent themes. Firstly, we present data on the young workers reflections on their experience of education, their perceptions of school since leaving and the reasons why they chose to leave school as soon as they were able. The paper moves on to examine the young workers reflections on what they had thought work would be like before they entered the labour market and then what the actual experience of work was, once employment commenced. Finally, the paper examines the process of becoming an adult.

Young Workers Reflections on Education

Within the interview schedule a series of questions asked the young workers to reflect on their decision to leave school. In contrast to Carter's (1963) sample, this group appeared not to have enjoyed school and as the quotes below suggest, the majority had been keen to leave school:

...it was the best day of my life when I left school...

...I were dying to leave the place. I were utterly fed up with it...

For many of them the authority of school was something they could not wait to 'escape', they commented that they felt 'trapped' by school and many of the comments used prison analogies to describe how they felt about school:

...I was thrilled at the prospect actually, the end of my sentence...

...I was dead happy, I hated school, being told to shut up every lesson, having to call people sir, not allowed to smoke...

As mentioned previously, the children in Carter's (1963) study were looking forward to starting work and moving towards adulthood and independence. Similarly, for our group, a key reason why leaving school was seen as an attractive option was because employment offered them the chance to earn their own money and was a step towards living independently. The decision to leave school was also influenced by friends who had already left school and respondents frequently expressed a desire to '...be like their friends'.

...I wanted to stand on my own two feet and begin to look after myself, earn my own keep...

...I wanted to get to work to be like the rest of my friends ... they start talking about work and you feel left out...

Clearly, however, as in Carter's research, there were also respondents who expressed anxiety at the thought of leaving school and entering the real world.

...I was a bit apprehensive, I had heard so many things about the big world, that it was harder than school...

...a bit nervous, not knowing what job would be like...

Following on from this question the respondents were asked if now, as young workers, they wished they had stayed longer at school. For the majority, some 67%, the response was negative. They were happy to have left school, again primarily because this had afforded them the opportunity to earn their own money.

...I do sometimes but I'd sooner be at work earning my own money...

As this quote illustrates there was an element of contradiction here for although many were happy to be earning their own money there was a perceptible sense of regret at leaving school. This centred on the feeling that on entering the labour market they had lost their freedom and they already felt nostalgic about the shorter school days, the school holidays and the breaks. It appears that even after a short time at work there was a realisation that work was harder than school and that in retrospect their school lives had been 'easy lives'.

...not really ...mind you miss school holidays, short hours, long dinner hours...

...I was fed up to the teeth with school but thinking about it now it's a lot easier than work...

...when you're at school you don't but when you're at work you realise it...

...I just regret leaving school. I realise now we had a pretty easy time. We weren't hard done by...

Whilst work was generally a better experience than had been anticipated a number of the respondents had realised, in retrospect, that their time at school had been very easy;

...I didn't know I was going to get nine 'o' levels and I think I could have done fairly well at 'A' levels. I was fed up to the teeth with school but thinking about it now its a lot easier than work...

...I liked it there, the hours were shorter and so you had more time to do other things...

Others had realised that if they had stayed on at school to gain more qualifications then their future career would have held more promise,

...School is better than work. I could have learnt more and got a better job...

...I couldn't stay any longer you had to leave at 15. If I'd had the chance I should have stayed - think I'd have benefited in the long run...

...when I consider that people who got A levels get more money thanI do.Would have liked to have done A levels again, i failed first time...

...it would have given me a better chance - given me a better start if I had done A levels...

As Willis (1977:107) comments '...ironically as the shop floor becomes a prison, education is seen retrospectively and hopelessly as the only escape'. This was certainly true for these respondents who explained that it was only once they were at work that they realised those who had worked hard at school and stayed on to take more qualifications were those who now had more successful and better paid careers.

However, the decision to leave had been made a long time earlier and had been informed by experiences both at home and at school. In reflecting upon their decision to leave school, one year after leaving, it emerges that many of this group had not considered staying on at school. As the quotes below illustrate the main reason for this was because they did not perceive themselves as being intelligent enough to continue their education.

...I wasn't brainy or anything like that, it wasn't worth me staying on...

...I have nothing against school, if I had been taking G.C.E. I would have stayed but in my case it would have been a waste

...I don't think that there is any point unless you know that you are intelligent and can go to university...

The data indicates that in deciding to leave school and enter employment '...young people are seen to place themselves firmly on one side of the English education system's academic/vocational divide' (Unwin and Wellington, 2001:31). In fact the decision of which path to take is often decided at a far earlier stage in the school career and is informed by teachers and reinforced by parental expectations and young people's experience at school. As Ashton and Field (1976) have argued, the positive or negative image the young workers acquire of themselves, first within the family, is later reinforced at school. Many pupils are seen as 'non-academic' from a young age and therefore have low expectations because they believe they are 'failures' in terms of school and see academic work as being irrelevant to their lives ahead. This view is largely formed from comments made by teachers that indeed staying on would be a waste of time for certain groups of school children.

Individual Perceptions and Expectations of Paid Employment

Having asked the respondents to reflect upon their experience of school, the interview schedule moved on to examine the young workers preconceived ideas about working life and their subsequent experience of work. Firstly, they were asked what they had thought work would be like. As the quotes below illustrate, although these respondents had been keen to leave school they were under no illusion about the reality of work and largely felt that it would be a bad experience. Whilst prison analogies had been used to describe the experience of school, work was compared to 'slavery'.

...I thought it would be ghastly, working continuously without a break, without being able to talk to anyone, thats what I thought it would be...

...a bit like school, very strict and worked like slaves...

...start in the morning and slave right through...

There was also an expectation or fear that like school, the workplace would be hierarchically structured and that the young worker would be at the bottom of this hierarchy. Their main concerns had been, for example, a fear of being 'told off', not being allowed to talk to workmates and being watched over constantly.

...expected everyone would be shouting at you...

...I thought you'd get told off if you did anything wrong...

As Willis (1977) explains, for some young workers employment was viewed as a route to earning money and it was expected that it would be unpleasant. Whilst this might be expected to deter the boys from leaving school this was not the case. Work was seen as an important life change to be looked forward to. They wanted to escape from school and however terrible the alternative appeared to be, '...the prospect of money and the cultural membership amongst real men beckons very seductively...' (Willis, 1976:100).

What was work actually like?

In fact, like Carter's (1963) sample, the majority of these school leavers were pleasantly surprised by their early experiences of work. They found that overall it was very different to school life and in general a more positive experience than school had been perhaps because of the 'dignity and freedom' (Carter, 1963) the young workers were given. For example, the workplace was found not to be strict or monitored and there was a lack of discipline compared to school. The work itself was easier than expected and the young workers found that they were treated as adults, able to work at their own pace and allowed to stop and talk to their colleagues. In this respect work was also less restrictive than had been feared and the older, established workers were friendlier than had been anticipated.

...It was much easier. They didn't stand over you watching everything you did like I thought they would...

...I expected someone to be sitting by me telling me what to do and to get on with it but it wasn't like that, it was much more free...

...Everyone friendly - if you did anything wrong you would be told but not told off...

...everybody just talking to each other and if you want a word with each other just switch machines off, put tools down and go and have a chat...

What also emerges is that there were high levels of occupational mobility amongst the group, particularly those categorised as 'careerless' by Ashton and Field (1976). If a young worker was not happy with the job he had taken there was no reason or need to stay. It was relatively easy to find alternative employment which offered more money or preferable work conditions.

Transition to adulthood

For most of these respondents, like those in Carter's (1963) sample, the idea of starting work was welcome, although some did express their fears about this life change. This fear focused on the prospect of entering the 'real world' and being 'amongst real men'. Work was seen as part of the adult world to which they did not yet belong and which they did not understand and they believed it to be frightening and unfriendly. Although Pilcher (1996) sees the transition to work as also being a transition to adulthood, these young workers were very aware that they were entering an adult world to which they did not yet belong, '...going into a factory with grown ups ... you'd feel like the odd one out...'. Even amongst the more 'confident' respondents there was a sense of uncertainty about the world they were entering. Clearly these respondents positioned themselves firmly as young workers, rather than adults, and they did not yet see themselves as being on the same level as the established workers.

The boys themselves were very clear in their thoughts as to what would symbolise their own transition to adulthood, citing characteristics such as 'not playing out', 'learning a trade' and 'having responsibilities' as being adult.:

..it's the way he behaves. Not shouting and gallivanting about. When he settles down and just behaves like an adult. But when they are walking about the streets and hanging around street corners- it's like being a 'teddy boy', but if you can go somewhere properly and not act daft like kids do, I think that's when you've become an adult

...the realisation you have got to work for a living, you can't mess about like you did at school. Mixing with adults all the day, you see the way they behave and you copy them.

lot of things, learning not to be took in- learning you're trade- and when you've learnt your traded you're an adult

Many of the boys also believed that older workers, due to their higher levels of responsibility should be paid more than younger workers even if they were doing the same job. They cited factors such as experience and knowledge, 'responsibility' and 'family circumstances' as reasons why a higher level of pay was justified.

> *...no, because the adult knows more and perhaps has got more responsibility, wife and kids...*
>
> *...not really because the adult that knows the most usually does more than the youngster, like me dad he does more than me sometimes...*
>
> *...no, because I don't think an adult and a boy can do the same...*

Further to this it seems that the young workers idealisation of earning their own money and becoming independent was often not realised. Like the children in Carter's research, earning money did not symbolise the freedom to spend that money as they wished. When asked what happened to their wages, the data reveals that far from being domestically and financially independent fewer than half the respondents kept the money themselves (47%). Many had to pass their wage packet to their mother (45%) or to share it equally with her (5.5%) or, for a small number, give it to their father (2.5%). Their parents would then allocate money for the young workers to spend on themselves. Once they had their own 'allocated' income, their patterns of consumption also identified the young workers as not yet being adult. For many their own money was not spent on the pursuit of an independent life style but on 'sweets' or 'going out' and buying clothes, records and cigarettes.

The respondents, then, saw adults as those who had responsibilities and behaved differently to themselves. To them adults were more experienced and learned and not 'with it'. They saw themselves as boys in all life contexts, for example, at work their colleagues were 'men', at home they still 'played out' and some still received pocket money. The money that they had was spent on sweets, going out and not on responsibilities. Indeed, as the quotes below illustrate, the boys were under no illusion that they were yet adults:

> *...not particularly- not yet. I like to have a bit of fun now and again. They don't mess about. Like me mate- when we were down his house we'd have a fight for a bit of fun*
>
> *...no- an adult has more experience with other people and more knowledge of how to deal with them...*
>
> *...no, far from it, I don't want to become old- if you know what I mean- I want to be always with it- if you know what I mean...*
>
> *...not at the present - you have still got plenty of things to learn really...*

5. Conclusions

Although the data presented here really only touches upon the themes discussed, and despite the fact that we have not really been able to fully reflect the depth of the data we have in this paper, a few tentative conclusions can be drawn. The data suggests that the young workers pre-work experiences of school and home were important in their expectations and experiences of work. For the majority school was a largely negative experience and they were keen to leave even though they had low and negative expectations of work. However, as Carter (1963) reports, these pre-work expectations were largely unfounded. Earning money was on of the key dimensions of work, although as suggested above the extent to which the young workers realised their desires to earn and spend money depended a great deal the household allocation of resources.

However, one of the main issues that has to be dealt with when using such historical data are the notions of *so what* or *does this add anything to what we already know*? Such questions can be dealt with on a number of levels. First, the use of historical data is useful in that it allows the possibility of re-testing or a re-examination of debates from the time that the data was collected. Second it allows the researcher to re-examine data in the light of contemporary debates. For example, this data contributes to the debate on the transition to adulthood yet this aspect of the data was not written up when it was collected. However, as suggested above, authors such as Pilcher (1996) argue that the transition from school to work is a part of the transition to adulthood. The data presented here suggests that such an assertion is problematic and that entering work at 15 or 16 the young workers were (and perhaps still are) children in many ways. This issue raises a number of questions for us centred around the ongoing discussion as to when adulthood begins and childhood ends. It could be argued that merely entering work does not mark the one single step that young people take towards adulthood as once thought. Likewise, Canny (2001) argues that the boundary between workplace and education has become blurred. From an analysis of this data we can see that historically there was a clear division between school and work for these young workers. One can only speculate as to the attitudes of this group towards education now, however this may have implications for current older workers and their view on contemporary debates such as lifelong learning.

One of the key themes that has emerged in past works on youth transitions is the assertion that somehow the entry to work in the past was simpler (Vickerstaff 2001) and that the transition from school to work has only become problematic since the availability of work for young people has decreased. However, the data presented above suggests that young people in the 1960s had very similar concerns about making the transition from school to work and that for many the process was (whilst not as bad as they thought) not always an easy transition to make.

Finally, as suggested above reflections on the 'past' are being used in current research (Fuller and Unwin 2001 and Vickerstaff 20001) but this has limitations. The use of historical data or the re-analysis of data collected at the time in question may provide a more accurate picture of events of the time.

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Typology of work experience: Analysis of the workplace training process in Quebec

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Typology of work experience:

Analysis of the workplace training process in Quebec[1]

For the past four years we have been researching the cooperative effort between schools and businesses with regard to workplace training. Our work is focused on an analysis of vocational study programs offered either in the form of alternance training or with training periods in the school and in work environment. The purpose of this study is to analyze the principal aspects of vocational training within the company in order to identify the difficulties and efficiency conditions involved in cooperative efforts between vocational education schools and private firms. This with a view to contributing to improving the quality of such training. Considering the "Typology of Work Experience" (Guile and Griffiths, 2001) as likely to contribute to the value of our analysis, we will attempt to make use of this typology to interpret the workplace training processes observed within four vocational education and training programs. Towards this end, we will examine the perceptions of students, teachers and company mentors involved in the programs under study.

In our presentation we will first outline the problematic, the conceptual framework and the methodology of this study on school-workplace cooperative efforts. Second, we look at the aspects of alternance training and work-related training offered in Quebec. Third, we will describe the "Typology of Work Experience" utilization method that we have developed to analyze our results, as well as the characteristics of the different actors who participated in this study. The heart of our presentation consists of examining four cases or vocational study programs using Guile and Griffiths' Typology of Work Experience.

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1- Problematic, conceptual framework and methodology

Technological and economic changes warrant concern in the political and educational fields with respect to training a skilled workforce. This situation has led to greater importance attached to labor market needs in school curriculums and increased the will to bring about closer linkage between education and production (Hardy and Maroy, 1995; Urquiola et al., 1997). It is in this spirit that we see promotion and development of educational experiences that put the accent on cooperation between schools and business and stress coordination between managers of vocational schools, teachers and representatives of industry (Stern, Bailey and Merritt, 1996; Brooker and Butler, 1997; Gendron, 1998).

In this perspective, the selected conceptual framework allows for analysis of the perceptions of students and teachers in vocational education programs, as well as those of mentors, with regard to alternance training or workplace training in which they have been involved. This approach is inspired by American studies on work-based learning, French studies on alternance training and European work done regarding work experience. With respect to these studies, we have concentrated on the work of interest to students, teachers and mentors. We have, however, also taken into consideration a number of complementary studies dealing with cooperative efforts between educational institutions and the workplace. With regard to the U.S. perspective, we will refer to the work of Stasz and Kaganoff (1997) and Evanciew and Rojewski (1999), who analyze students' training experiences within various firms. With regard to the French perspective, we consider studies on the diverse aspects of the functions of mentors in the workplace training process, notably the work of Geslin and Liétard (1993) and Agulhon and Lechaux (1996). More recently, we have drawn upon the European work directed by Griffiths and Guile on "The Work Experience" (Guile and Griffiths, 2001; Griffiths et al., 2001) and that of Lasonen (1999, 2001), who look at students, teachers and mentors and are particularly concerned with the workplace learning.

In terms of methodology, this study of teachers, mentors and students involved in workplace training is based on a case-study approach inspired by the model advanced by Stake (1995). The cases studied, or the analysis units, consist of seven study programs[2]. In our analysis, we will focus on four alternance-training programs concerning the following occupations: Jewelry-making, Drafting, Industrial mechanics and Power engineering technology[3]. The four programs studied are taught in three vocational education and training centers in the Montreal region. We will look at the viewpoints of 71 students, 14 teachers and 25 mentors. The analysis data were collected in semi-directed

[2] - The programs studied are as follows: Drafting, Power Engineering Technology, Secretarial Training and Modeling offered in alternance form. We also analyzed three other programs: Jewelry-making, Industrial Mechanics and Hairstyling, which are taught in both alternance and "regular" form (with a three-week internship at the end of the program) to two separate groups within the same school. We thus examined seven study programs offered to ten groups of students. These students were being taught at six Montreal-area vocational centers.

[3] - The programs prepare students for work in the following sectors, respectively: Drafting prepares students for architectural occupations; Jewelry-Making provides training in jewelry design and creation; Industrial mechanics offers instruction on systems maintenance and the reparation of production, building or factory equipment (conveyors, presses, packing devices, ventilation units, etc.). Power engineering technology prepares mechanics who will be responsible for the smooth functioning of equipment at a thermal power plant.

interviews that were recorded. Students were interviewed for 20 minutes, teachers for 60 minutes and mentors for 30 minutes. After being transcribed, the interview contents were coded and processed using the NUD*IST software[4]. The information thus processed was then analyzed using an inductive approach wherein we identified the most significant themes. This in order to gain an understanding of the workplace training process by considering the roles of the different types of actors, the results of the students' internships and the impact of this training on the companies involved, along with the problems encountered by teachers and mentors.

2- Characteristics of alternance training in Quebec

The reform of vocational education and training in Quebec in 1987 (Ministry of Education, 1987) integrated a three-week internship period in nearly all vocational education programs. This reform also grouped young people and adults together in the same classes. Beginning in 1992, the desire for a drawing together between the education and workplace environments led to implementation of "alternance training". The alternace-training model adopted in Quebec was inspired by alternance training developed in France (Agulhon, forthcoming, 2001). It also shares features with the "co-operative education" method devised in Canada and the United States (Grubb and Villeneuve, 1995; Munby, Hutchinson &Chin, 2000).

Alternace training consists of a structured combination of "periods of training in an educational establishment and internship periods in the workplace, in relation to a curriculum leading to vocational certification" (*Direction générale de la formation professionnelle et technique*, 1995, p.11). Officially, the integration of alternance training within a vocational curriculum may be intended mainly to facilitate the acquisition of curriculum competencies in the workplace, or to transfer competencies already acquired to a real-world setting, in addition to facilitating students' transition from learning to practicing their chosen occupation.

There are several types of alternance training, with the number of training periods ranging from two to seven and the length of each internship period varying between one and six weeks. Such flexibility allows for adaptation to companies' diverse constraints and to sectorial particularities within the work environment. Alternance training varies as follows in the four programs studied: the Jewelry-making, Drafting and Power engineering technology programs offer students four internships lasting approximately four weeks each, while the Industrial mechanics program offers three internships -- two lasting four weeks each and one lasting six weeks.

The fact that a student is registered in an alternance-training program does not, however, ensure that he or she will in fact do all the internships called for in the program. While students in the Industrial mechanics and Power engineering technology programs can find a company ready to receive them for each of their internship periods, persons in Jewelry-making and Drafting are not directed towards an internship by their teachers when their school

[4] - The interviews were gathered, encoded and then analyzed by Rita Bissoonauth, Olenka Brynczka, Guylaine Cyr, France Dessureault, Nadine Fortin, Sophie Grossmann, Marie-Josée Gicali, Pascale Gingras, Danielle Melançon, Olivier Ménard et Louis Trudel under the authors' supervision.

performance is poor, when they have failed one or more courses, and when they have been absent or late too often. The teachers justify their decisions by pointing to the demands of firms, which want responsible and self-reliant trainees, and to the deficiencies of the students in question, who are unable to meet the minimum requirements of the workplace. These students benefit from a personalized catch-up program that can lead to participation in the next internship period offered.

In 1998, the Quebec Ministry of Education implemented a financial support program with the goal of increasing the number of students taking part in alternance training. This program assists companies by covering a portion of the costs involved in the time that mentors spend managing trainees. It also assists schools by providing them with funding to encourage them to increase their number of alternance-training programs and the number of students involved (Gauthier, 2000, 2001). Alternance training is still not a prevalent form of training, however, because such programs involve fewer than 10% of individuals enrolled in a vocational education program.

3- Using the "Typology of Work Experience" method

All our interviews had been conducted and a portion of these had already been analyzed when we learned of the work done by Griffiths and Guile and their many collaborators. So, although our conceptual framework was relatively similar to that used by Griffiths and Guile, the content of our interviews did not enable us to cover all the aspects of the "Typology of Work Experience" already presented.

After studying the conceptual framework established by Griffiths and Guile (Guile and Griffiths, 2001; Griffiths & al., 2001), here is how we used their "Typology of Work Experience" to analyze the results of our interviews and how we linked our empirical data with the principal elements of this typology. We should point out that the combined data gathered from students in schools and in the midst of internship periods and from the teachers and mentors managing them had already been codified according to a synthesis grid, which allows for analysis of all the interviews along five general aspects, or themes: 1) characteristics of actors, 2) teaching within the school environment, 3) workplace training, 4) relations between the students, teachers, mentors and employees where the internship takes place, and 5) evaluation of the alternance-training model.

The data drawn upon to utilize the "Typology of Work Experience" derive mainly from *Section 3: Workplace training* . This section covers the perceptions of students, teachers and mentors regarding the following areas: preparation of internships, aspects of the training sites, the tasks and other activities of trainees, integration and support in the training environment, evaluation of the student and the training environment, and identification of the learning called for and the learning actually carried out during the internship period. We also drew upon certain elements contained in *Section 5: Evaluation of alternance-training model.* These deal with the perceptions of students, teachers and mentors concerning the assessment of the training provided at school and in workplace.

We then transposed these perceptions of students, teachers and mentors to the first four elements comprising the "Typology of Work Experience": 1) Purpose of work experience, 2) Assumptions about learning and development and Outcome of work experience[5], 3) Focus of work experience, and 4) Management of work experience, which we differentiated in two sub-categories: preparation of the internship and monitoring of the student.

After analyzing the above-mentioned units, we were able to distinguish perceptions regarding learning and development and the outcome of the work experience. The final element of the typology, entitled Role of education and training provider, was inferred from the two sub-categories involving management of the work experience. The results of the analysis of the content of each of the typology elements for each of the four study programs was then compared with the definition of each of the five "Typology of Work Experience" models (Guile and Griffiths, 2001; Griffiths et al., 2001) already presented.

4- Characteristics of students, teachers and mentors

In the four programs analyzed, we met with 71 students, 14 teachers and 25 mentors (Table 1, appended). The number of *students* ranges from 17 to 19 in each of the programs. Jewelry-making comprises mainly female students (n=14/17), while Drafting and Power engineering technology are made up almost exclusively of males (n=17/18) and there are only male students in Industrial mechanics (n=19). The average age of students in the Industrial mechanics and Jewelry-making programs is 21.7 and 23.5, respectively, with all students being under 30 years old. The average age is higher in Drafting (25) and Power engineering technology (24.7) since these programs include students who are up to 38 and 41 years old, respectively[6]. At least four out of every five students already had a high school diploma when they began their vocational studies. A number of individuals (n=9), concentrated in Power engineering technology, already held a vocational diploma in a related occupation. Nearly 10% of students had already begun or completed college or university studies. The *teachers* are all male, with the exception of one Jewelry-making teacher and one Drafting teacher. The average age of teachers in each program is close to the overall average age of teachers (44.6). Almost all the teachers have university degree in education. With the exception of Drafting teachers, on average, teachers have spent a longer period of time working in industry than they have teaching. All the *mentors* are men. As with the teachers, the average age of mentors in the different programs is roughly the same (40 to 43.2), but these individuals are two years younger on average than the teachers. All the mentors have a technical diploma in the field in which they practice. Half of them (n=12) have a college diploma, while a third, concentrated in Drafting, hold a university degree. Average work experience ranges from 11.3 years in Industrial mechanics to 18.7 years in Power engineering technology. All the mentors have managed trainees for a period of approximately three years to up to nearly seven years.

[5] - The progress of our analysis at that time did not enable us to distinguish with sufficient precision, with respect to each program, between Assumptions about learning and development and Outcome of work experience.

[6] - This is explained by the Quebec policy of integrating young and adult clienteles in vocational training classes.

5- Analysis of work experience in four vocational programs

Our analysis led to the four programs studied being classified within two of the "Typology of Work Experience" models. Workplace training in the Jewelry-making and Drafting programs corresponds to the *traditional model* while Power engineering technology workplace training corresponds to the *experiential model*. Industrial mechanics workplace training combines the characteristics of the *traditional and experiential models*.

In the case of each program, we first identify the conditions concerning the emergence of alternance training, since these are not independent of the workplace training model offered. Next, we explain the classification of each program within one of the typology models, presenting the particular perceptions of the corresponding students, teachers and mentors. More specifically, we again deal with the principal elements of the work experience typology that are specific to the traditional and experiential models, as indicated in Figure 1, appended, taken from Guile and Griffiths (2001), these being:

- Purpose of work experience
- Assumptions about learning and development
- Focus of work experience
- Management of work experience
- Outcome of work experience
- Role of education and training provider

Metaphorically speaking, we can say that we "dress" the structure of the traditional or experiential model by presenting the perceptions of the students, teachers and mentors and the descriptions they have provided, which together allow for identification of the elements of the work experience. We then specify the "color" of each model within each program based on the perceptions of the actors. The format of this presentation does not, however, allow for recalling each model's theoretical dimensions, already presented.

5.1- Traditional Model in Jewelry-making and Drafting

The Jewelry-making and Drafting programs are offered at the same vocational education center. Implementation of alternance training is the result of the center wanting to inject new life into its programs, thereby making them more appealing to a broader clientele. The center's concerns with regard to *Jewelry-making* were discussed by its management committee, on which sat the workshop supervisor of a prestigious jewelry firm who offered assistance in incorporating alternance training into the Jewelry-making program. The workshop supervisor then made a commitment to welcome students for training and the teachers pledged to prepare the students for such training. The initiative thus involved one single company and the involvement of this firm depends *solely* on the willingness on the

part of the workshop supervisor[7] and the teachers to work together. For its part, the *Drafting* program was competing against the same type of program offered by the neighboring school board. Since the two programs could not both survive, the management of the center and the teaching staff decided to implement alternance training in order to attract more students by offering internship training. Alternance training thus became one way to save the program and the jobs of the teachers at this training center.

The *Purpose of the Work Experience* is expressed by the teachers in terms of *launching into work.* In *Jewelry-making* and *Drafting*, teachers view workplace training for students as providing them with an initiation into the reality of the workplace, enabling them to acquire work experience and preparing them for the labor market. Jewelry teachers also count on the putting into practice of what has been learned at school. The *Assumptions about learning and development* of the three groups of actors are centered on technical and social *Adaptation* in the work environment. *Technical* adaptation involves development of basic manual skills, improvement of work methods related to handling tools, and the execution of techniques. This adaptation process is seen as being linked to the knowledge acquired at school. Adaptation is also *social* in nature because the internships prepare the student to enter the labor market, stimulating the acquisition of social-behavior skills sought by companies and contributing to the development of self-reliance, self-confidence and resourcefulness. In Drafting, the different actors also look upon workplace training as a means to gain a greater understanding of the realities of work organization and the labor market.

With regard to the *Focus of the work experience*, the majority of Jewelry-making and Drafting students complete their four internships at the same firm, where their activities consist of *carrying out the duties* to which they are assigned, all the while *adhering to the rules* of the workplace. The method of defining these duties differs from one program to another. In *Jewelry-making,* the internship project is developed at school, where students design a piece of jewelry which they will produce during their internship. The project for each internship corresponds to a module of the study program and is approved by the teacher. In *Drafting,* the students execute diverse tasks they have been given by their workplace mentor based on the progress of their work unit's production activity. In the two programs, a portion of the students would like to be able to carry out more activities or to have more work to do.

Management of the work experience is defined as *supervision* by the mentor and the teacher. The nature of this monitoring is tied to the focus of the activity. In the two programs, the *preparation of each internship* is carried out by the teachers, who select the students ready to do in workplace training and who explain how the internship proceeds, as well as discuss the different aspects of the training environment. In *Drafting,* the teachers guide and advise students in their internship search. In *Jewelry-making,* the teachers manage and plan in detail students' activities during the internship (making a piece of Jewelry). During internship, the role of *mentor* is specific to each program. In *Jewelry,* the workshop supervisor acts as the mentor. This person gives trainees advice concerning their project, helps them resolve problems and talks with them about their learning goals. The trainees say that they enjoy

[7] - This workshop supervisor is an employee of the company. This person has in fact already had to reduce the number of interns so that workshop production is not hindered. Teachers fear that when this individual quits his job, the partnership with the company will be terminated.

good communication with the workshop employees, whom they can observe working and question provided they do not affect productivity. The product of the student's work remains his or her property and cannot be sold. The student in no way contributes to the firm's production. In *Drafting,* the mentor, seconded by one or more employees, specifies the diverse tasks to be done by the trainee, whom the mentor also advises with regard to technical matters. The trainees thereby assist the employees in their work and contribute to production. During the internship, the *Jewelry-making teachers* visit their students once a week. At that time they answer trainees' questions, assist them in resolving difficulties and encourage them. The trainees comment that these visits are a help in regards to carrying out their internship project. During a visit, the teacher also listens to the mentor's comments and answers this person's questions. The *Drafting teachers* meet quickly with their students once during the one-month workplace training. At that time they find out how the training is going and listen to comments. There appears to be no time for reflecting upon the work being performed or for any type of instruction whatsoever. Several trainees describe these visits as useless and too short.

The *Outcome of this work experience* is said to be *skill acquisition and knowledge of "work readiness"*. More specifically, *Jewelry-making* students add to what they have learned at school and gain a better understanding of what their occupation actually entails. *Drafting* students, for their part, say they receive training adapted to preparing them for the labor market and develop the behavioral skills required in the workplace, which they hope will facilitate their search for their first job in the field. Lastly, all actors consider that the work experience motivates students to intensify their learning efforts and to continue their vocational studies.

The *Role of education and training provider* is defined as *provide formal preparation in line with study programs.* In the two programs, the *teachers* place importance exclusively on application of the program of study and try to see to it that each internship period satisfies a particular aspect of the program. They complain that the internships reduce the number of hours in the classroom and appear to view the internship period as time that cuts into training during which the students apply what they have already learned in school. They do not perceive the company as a site of knowledge acquisition and do not seem to recognize the advantages of learning in a real context. What is more, the teachers in the *Jewelry-making* program stress the difficulty involved in getting the mentor to complete the internship booklet and decry the fact that students cannot get an immediate response to their questions because the mentor and employees are not available. For their part, all the *mentors* consider that the internships are too short with regard to the learning to be done and emphasize that they lack the time to properly monitor trainees. They do not, however, appear to see the company as constituting a context favorable to the learning of specific knowledge and skills, but rather as a place different from school where they can apply what they have learned. They also emphasize that training should be done by the school. Teachers, especially those in Jewelry, and the mentors seem to view the workplace experience as a time that should be devoted solely to the official goals of the study program. The internship period is strictly a time for adaptation to or preparation for the work environment.

5.2- Experiential model in Power engineering technology

Implementation of alternance training in the Power engineering technology program is an initiative of the Ministry of Education, which thereby sought to respond to the needs of the workforce in this sector and overcome the financial problems involving the acquisition of very expensive equipment. This initiative is currently limited to one vocational center. The Power engineering technology curriculum has been revised in collaboration with industry representatives[8] and the teacher in charge of implementing the alternance program in the selected center. One of the main objectives of this curriculum revision was to enhance the quality of the education offered by benefiting from the training value of the work environment and maximizing the co-development of the academic education and the workplace training. In this context, the student's four internships must take place in four different firms.

The *Purpose of work experience,* as expressed by the teachers in the Power engineering technology program, is described as seeking *co-development between education and work.* The teachers state this objective in the following terms: 1) Consolidate the skills learned at school with diversified and complementary work experience, 2) Teach the student to reflect upon and answer his or her own questions in different work environments, 3) Stimulate the student's development of relational maturity and a sense of responsibility, and 4) Put into practice the theory presented at school. Following this logic, the *Assumptions about learning and development* are formulated in terms of *adaptation and awareness of the complexity of the work experience* and thus correspond to the *experiential* model. Students and teachers stress the variety and complexity of the work experience acquired. More specifically, they speak of workplace training as a means of learning about different work environments and acquiring particular vocational skills during each training period that are transferable from one internship environment to another. It is pointed out that students can thereby relate the tasks they perform in the company with theoretical knowledge acquired at school. In addition, they can develop their flexibility thanks to the diversity and complexity of the tasks and the equipment available in different firms, and thanks also to the variety of work methods used by the mentors and the employees with whom they come into contact. The actors also have perceptions typical of the traditional model, such as preparation for the labor market, learning behavior in line with workplace expectations, and development of self-confidence and self-reliance within the work environment.

The *Focus of the work experience* enables students to *harmonize various sources of stimulation and to multiply their work experiences.* The themes and objectives of the four internships are defined by the teachers and presented in separate internship booklets. This training was carried out in different companies and all the students performed diverse tasks involving aspects of production and maintenance related to the theme of each internship. According to the teachers, many graduating trainees are viewed as new employees without experience and work independently. The majority of students added that the learning they did during their internships contributed to achieving the objectives set forth regarding their training.

[8] - In Quebec, all vocational and technical programs are reviewed by the National vocational and technical teaching program committee attached to the vocational and technical education directorate within the Ministry of Education. This committee is headed by the deputy minister responsible for vocational and technical education and brings together employer, union and education-sector representatives.

Management of the work experience is defined as *diversity of the forms of supervision. Preparation of the internships* is handled by the teachers, who prepare in a general way the various courses in the curriculum and conduct a more specific preparation process prior to each internship. The teachers select the site of the training based on the training goals and direct each student to a particular location, taking into consideration the person's preferences and where he or she lives. The students stated that their teachers explained to them how they were to conduct themselves and the technical skills to be acquired within the company, and that they also described the different contexts of the internship. In addition, the teachers specified the training goals in a booklet given to the mentors and the students. However, the majority of the *mentors* supervise their trainee following the *traditional model.* They define and explain the tasks assigned to the trainee and check them. Some mentors delegate monitoring to an employee with whom the trainee is paired. One quarter of the mentors conduct closer monitoring, applying the theory learned by the student or designing simulations that enhance the student's understanding. All the mentors appreciated the trainees' presence and all the trainees praised the employees' positive attitude and their generosity in sharing their knowledge. During the internship, the *teachers* visited each training site each week, staying for seven to nine hours. At that time they reviewed the internship goals and worked with each student to help them achieve their goals and make connections between what they were doing and what they had learned at school. This role is confirmed by the majority of the students, who say that their teacher assists them in putting their theoretical knowledge into practice, requires them to reflect upon their questions and come up with answers, and guides them in identifying the process likely to lead them to the solution they are seeking. Most of the students stress the usefulness of the teacher's visits with regard to getting answers to their questions and ensuring that they are making progress. This monitoring by the teachers is in accordance with the *experiential model.*

The *Outcome of this work experience*, as expressed by students and teachers, has largely to do with the *acquisition of skills and knowledge in preparation for work* and pertains more to the *traditional model.* The work experience contributes to developing occupational competencies and sometimes goes beyond the training plan. With regard to social skills, the students acknowledge that they advance in terms of level of self-confidence and self-reliance, enhance their flexibility and develop greater pride in their work, and become more aware of the social role that their occupation entails. The diversity of their training experience helps them develop their socio-occupational network, further stimulates their interest and curiosity regarding their occupation, and motivates them in terms of pursuing their studies. The perceptions related to the occupation's socio-economic role can be interpreted as being in line with the *experiential model.*

The teaching strategy used to promote workplace learning confers a major role upon the teachers, who handle practically all the preparation plus a major part of the training and follow-up of the trainees. They also assume responsibility for relating what has been learned in school to the students' in workplace experiences and encourage reflection on the students' part both before and during the internship. The teachers' involvement continues after training is finished, at which time they tie the students' workplace experience to what they learn back at school and

endeavor to help them find answers to technical and personal problems encountered during training. The teachers' role conforms with the characteristics of the *experiential model.* On the other hand, the teaching role of the mentors and the other mechanic employees -- who welcome the students, help them and do not complain about not having enough time with regard to monitoring them -- corresponds more to the *traditional model* oriented towards integrating trainees into the work environment. For their part, the students respond positively to the teachers' actions, meet their expectations and seem to appreciate the training received. They are not, however, actors who consciously participate in the experiential learning scenario implemented by the teachers.

5.3- Combining the traditional and experiential models in Industrial mechanics

The vocational education and training center offers the Industrial mechanics program in two forms: alternance and "regular". Alternance training was introduced as part of this program in order to diversify the training sites and learning modes offered and to better respond to the needs of young people with little or no workplace experience[9]. Aside from the three internships at three different companies, students in the two groups are taught the same courses given by the same team of teachers. The *Purpose of the work experience* is identified by Industrial mechanics teachers as first of all of the *traditional* type, i.e. it aims to achieve integration in the labor market and at the application of what is learned in school. It is also of the *experiential* type since the teachers emphasize the diversification of the work experiences and students' acquisition of relational maturity and a sense of responsibility.

The *Assumptions about learning and development* articulated by the teachers and students concern primarily the typical *adaptation* of the *traditional model.* They first of all view the work experience as a means of understanding the reality of the work environment and as a period of preparing for the labor market during which the student develops the behavior and attitudes expected in the workplace. At the same time, the person enhances his employability, gains self-confidence and becomes more self-reliant. This adaptation also makes room for the application of knowledge learned at school and the acquisition of occupation skills. Some perceptions are, meanwhile, of the *experiential* nature. For example, the majority of students emphasize their familiarization with various work environments that enables them to develop new skills thanks to the tasks they perform and the equipment they use, which are more complex than what they deal with at school. The *Focus of the work experience* also appears to be of the *experiential* type, since the students work at different training sites where they perform diversified tasks related to the equipment repair and maintenance. Most of the students consider that the tasks they carry out during training indeed stimulate their in-school learning.

Management of the work experience corresponds to the *supervision* aspect of the *traditional model.* The *preparation of each internship* is done by a teacher who acts as training coordinator. This person's role centers on initiating students in job searching through the search for an internship site. The teacher advises and guides the students, checking the steps they take. They then ensure that each firm that has chosen a student has assigned a mentor to supervise him and plans to assign the student tasks typical of Industrial mechanics work. During the internship, the *mentors,* often supported by one or more employees, give the trainee a variety of jobs to do. Half the mentors say they speak with the trainee in order to help the person correct his weak points. The students praise the positive attitude and availability of their mentor or the employees with whom they work. The *teacher,* the training coordinator, is the only person who contacts the student during the internship. During the first few days of training, he calls all the students and then all the mentors to make sure that the training has started off well. During the

[9] - The youngest applicants are invited to register in the alternance program while the older applicants are directed towards the regular program, which offers only one internship at the end of the study program. The average age of the students in the alternance program is 21.7 and that of the students in the regular group is 26.6.

second half of internship, the coordinator visits the students on-site to check on the tasks they are performing and possibly give advice. More than three-quarters of the students do not, however, see the usefulness of these visits.

The *Outcome of the work experience,* as evaluated by students and teachers, involves two types of outcomes. The outcome is of the *traditional* type when expressed in terms of enhanced employability and increased interest and motivation with regard to pursuing vocational studies and practicing the occupation. The outcome appears to be of the *experiential* type when the students and teachers stress the acquisition of diverse experience related to vocational school learning and the gaining of maturity.

The *Role of the education and training provider* is not very structured and is oriented towards complementing the student's in-school learning. The *teacher* who acts as internship coordinator is principally involved in each student's training-site search. After ensuring that the company that is welcoming the particular student offers relevant and varied experience, the teacher counts on the workplace's training resources. The role of the other teachers is limited to call-backs or occasional questioning that constitutes part of their respective courses. At that time they encourage students to draw relationships between what they have experienced within the company and newly acquired knowledge, which the teachers explain. The *mentors* monitor the trainees and give them feedback to help them in carrying out the tasks they assign them and in handling related equipment. They do not, however, appear concerned about students improving their ability to reflect upon their training experience. The role of the teachers and mentors corresponds to the *traditional model.*

The entire work experience of students in Industrial mechanics conforms more to the traditional model than to the experiential model because student monitoring and the role of the educational and training provider incorporate strictly the particularities of the *traditional model.* With respect to aspects of the work experience in which the two models are combined, it appears to us that the traditional model is more influential. The focus of the work experience is the sole element that is classified strictly within the experiential model. While the teachers and mentors are conscientious about providing a complex and diversified work experience, they make little use of the training potential of these contexts in order to stimulate reflection among students and enhance their vocational development.

Conclusion

Despite a certain diversity with respect to the organization of the work experience among the different vocational programs offering alternance training, we in fact observe quite a degree of similarity between the various work experiences and the types of learning involved. The traditional model characterizes three of the four programs presented. Furthermore, we consider that the work experience integrated in these three programs is similar to most of the alternance training implemented in 69% of vocational education and training centers and proposed in 42% of the vocational programs taught in Quebec (Hardy, 2001). The fourth program -- Power engineering technology -- is

characterized by a disparity between the school's contribution and that of the company and between the role of teachers and that of mentors in the monitoring of workplace training.

The work experience offered in Power engineering technology, as conceived by the Ministry of Education and sought by teachers, could be considered to conform to the *connective model.* This one is oriented towards *"reflexivity" learning* and focuses on work experience that is likely to enable the student to expand his or her knowledge and further develop his or her abilities and lead to "boundary crossing" or to transfer their skills. This experience does not produce the hoped-for results, however, because review of the workplace training model is limited to the curriculum and the role of the teachers, workplace mentors continue to play their traditional role, and there is no development of a partnership with the work sites in order to create true learning environments. This experience is, nevertheless, considered exemplary by the various actors in the educational and production environments. These persons expect that the experience can be repeated in other industrial sectors and thereby contribute to re-energizing and even "revolutionizing" the contribution of the Quebec work environment to vocational and technical training. They risk being extremely disappointed, however.

The training of mentors and the involvement of the human resources department are aspects of the issue that go largely ignored in workplace training development in Quebec. It would seem that many believe that the work environment can promote learning simply by accepting one or a number of students for approximately one month. This analysis, drawing upon the "Typology of Work Experience", points out the deficiencies with respect to the learning provided to students in the majority of alternance-training programs compared with the outcome that could be achieved if vocational learning were a fundamental part of the work environment. It underscores the importance of the role of teachers and mentors in monitoring workplace training. And it emphasizes the importance of meeting the training needs of teachers and mentors so that these persons can then enable their students or trainees to benefit from the learning potential offered by the work environment.

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Table 1 –

CHARACTERISTICS OF THE STUDENTS, TEACHERS AND MENTORS IN THE FOUR PROGRAMS

	JEWELERY-MAKING	DRAFTING	INDUSTRIAL MECHANICS	POWER ENGINEERING TECHNOLOGY	TOTALS
STUDENTS	N = 17	N = 17	N = 19	N = 18	N = 71
Gender					
Male	3	14	19	17	53
Female	14	3	0	1	18
Average age	23.5	25	21.7	24.7	23.6
Age spread	(19 to 29)	(19 to 38)	(19 to 29)	(19 to 41)	(19 to 41)
Education					
High school	14	13	16	10	53
Vocational studies		1	2	6	9
College/university	3	2		2	7
TEACHERS	N = 2	N = 4	N = 5	N = 3	N = 14
Gender					
Male	1	3	5	3	12
Female	1	1	0	0	2
Average age	43	46	44.4	44	44.6
Age spread	(30 to 56)	(33 to 60)	(36 to 51)	(41 to 47)	(30 to 60)
Education					
Vocational studies	1				1
College – technical		3	1		4
University - teaching	2	4	4	3	13
University - technical		3		3	6
Average teaching experience (years)	9.5	15	8.6	5.3	9,9 ans
Average industry experience (years)	19	10.5	13.4	20.3	14,9ans
MENTORS	N = 2	N = 5	N = 10	N = 8	N = 25
Gender					
Male	2	5	10	8	25
Female	0	0	0	0	0
Average age	40	43.2	43.1	41.5	42.4
Age spread	(33 to 47)	(40 to 49)	(26 to 56)	(32 to 53)	(26 to 56)
Education					
Vocational studies			3	1	4
College - technical	2		4	6	12
University		5	3	1	9
Average work experience (years)	16	13.5	11.3	18.7	14.4
Average experience as training monitor (years)	5	3.9	6.8	3	4.5

Figure 1

Typology of work experience[1]

	JEWELERY – MAKING DRAFTING	POWER ENGINEERING TECHNOLOGIE
	INDUSTRIAL MECHANICALS	
MODEL OF WORK EXPERIENCE	**TRADITIONAL MODEL**	**EXPERIENTIAL MODEL**
Purpose of work experience	'Launch' into work	'Co-development' between education and work
Assumption about learning and development	ADAPTION	ADAPTION & SELF-AWARENESS
Focus of work experience	Managing tasks and instructions	Managing contributions PLUS -recording experiences
Management of Work Experience	SUPERVISION	ARMS-LENGTH SUPERVISION
Outcome of Work Experience	Skill acquisition Knowledge of 'work readiness'	Economic & Industrial Awareness
Role of Education and Training provider	Provide : formal preparation programme	Facilitate : briefing for and de-briefing of work experience

[1] Extract from the Figure "Typology of work experience" In Guile, D. & Griffiths, T. (2001). Learning through work experience. Journal of Education and Work 14(1)

APPRENTICESHIP IN FRANCE, IRELAND, THE NETHERLANDS AND SCOTLAND: COMPARISONS AND TRENDS[1]

JANNES HARTKAMP[2]

1. Introduction

Apprenticeship has an impressive history as arguably the oldest form of vocational education. The specific combination of schooling and work also seems to have a promising future. Extensive apprenticeship programmes are certainly not a general, ready-made and easily transferable solution to tackle youth unemployment and improve the linkage between educational systems and labour markets, as sometimes has been suggested (e.g. EC, 1997; EC, 1996; OECD, 1996; OECD, 1994), often simply on the basis of the low German youth unemployment rate and the size of the German apprenticeship programmes. It has proved very difficult to assess the real relative merits of apprenticeship programmes, mainly because real alternatives for a direct comparison can seldom be found and because the relative merits highly depend on type and timing of the criteria used (see Ryan, 1998). Still, the apprenticeship programmes in different countries - each having a specific place, role and function within the respective transition systems (Hartkamp & Rutjes, 2000) – undoubtedly have their value. And the rise of 'life-long learning' as a core concept in education and labour-market policy opens new perspectives for apprenticeship. At present apprenticeship programmes are largely targeted at young people who leave school-based secondary education to train them for certain skilled manual occupations, but there is no reason why apprenticeship would not work for other age groups and other sectors and occupations. Indeed, apprenticeship may become an

[1] This paper builds on the work carried out in the CATEWE project (Comparative Analysis of Transitions from Education to Work in Europe; TSER, Area II.3; see www.mzes.uni-mannheim.de/projekte/catewe).

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important instrument in the implementation of life-long learning policies. And the existing differences in the role, place, function and organisational formats of apprenticeship across countries provide a rich variety of examples that can be used in building well-tailored programmes for life-long learning, fine-tuned to the needs of each group and the characteristics of the 'surrounding' labour market and ET-system.

Subject

A small part of the rich variety in apprenticeship programmes has been analysed by Hartkamp and Rutjes (2000) which outlined the general cross-national differences and similarities in the position of apprenticeship programmes within the respective transition systems of France, Ireland, the Netherlands and Scotland around the mid-1990s, and compared basic characteristics of apprentices, using the 'current' CATEWE SLS database which integrates several recent national school leavers' surveys (see CATEWE, 2000). Even these four Western European countries with relatively modest apprenticeship programmes turned out to differ significantly in the role and position of apprenticeships and the characteristics of apprentices. Roughly sketched apprenticeship is an alternative to school-based vocational education in France and the Netherlands and a type of post-school vocational training in Ireland and Scotland. In the first two countries apprentices are much younger and have a lower level of education than school leavers in 'normal' jobs, whereas in Ireland and Scotland these differences are small or absent. The countries also differ strongly in the type and range of occupations for which apprentices are trained. Apprenticeship in Ireland is almost exclusively limited to skilled manual occupations, less so in Scotland, while in France and especially the Netherlands the array of occupations is rather broad (see table 1 and 2). Looking from another angle, in Scotland apprenticeship is more often the main route to a specific occupation or group of occupations than in the other countries, and seems sometimes the only way there.

Given the variation in programmes and transition systems the percentage of school leavers in an apprenticeship about one year after leaving secondary school was surprisingly close in the four countries around 1996, around 10 per cent. In the current paper we will look at the developments in the size of apprenticeship programmes as a whole and at changes in the distribution of apprentices over occupational categories

importance in three of the four countries (Ireland, Scotland and the Netherlands) over the last two decades of the last century.

Data and methods

The data used here are taken from the 'time-series' school leavers' surveys (SLS) database that has been constructed as part of the CATEWE project. This database integrates five surveys of school leavers in Ireland (1980, 1985, 1989, 1993 and 1997), five for Scotland (1979, 1985, 1989, 1993 and 1995) and three for the Netherlands (1989, 1993 and 1997), each surveying school leavers who left secondary education the previous school-year, about one year earlier. The period covered for the Netherlands is much shorter because the Dutch survey was initiated later. No representative time-series data were available for France, which is why the country is excluded from this study.

In principle the surveys include all 'second level system leavers': young people who had left full-time secondary education and had not re-entered it at the time of the survey. An important exception to this principle are Scottish leavers who left secondary school to enrol in education at the secondary level in colleges for Further Education. Iannelli and Raffe (2000) estimated the size of this group for the 1995 survey at 12-13 per cent of all leavers.

The time-series database has been constructed on the basis of a common set of variable-definitions. Where changes had taken place in the phrasing of questions in the surveys over the years, categories have been recoded to ensure consistency. Where the national classification systems for the coding of responses had changed, existing 'mappings' were used when available, specific mappings constructed when necessary. The national occupational and industrial classification systems changed in all three countries during the period studied here. In spite of the common variable definitions and the recoding procedures, some minor changes between different time-points concerning occupational categories may be caused by classification-artefacts (see CATEWE, 1999 for more details on the database).

What is and what is not an apprenticeship is hard to define sharply and consistently in an international-comparative context by objective criteria.[3] Apprenticeship certainly has certain features in common across countries (see Hartkamp and Rutjes, 2000 for an overview of the structure and organisation of the programmes in France, Ireland, the Netherlands and Scotland. See also Hannan, 1999; EURYDICE/CEDEFOP, 1995; CEDEFOP, 1999), but in some cases rather similar programmes might be known as 'apprenticeship' in one country and 'training programme', for instance, in another. Here we follow the national terminologies: programmes categorised as apprenticeships in their respective countries are regarded as apprenticeships here. In addition to this it should also be pointed out that 'apprentices' in this paper are those who had apprenticeship as their main activity at the time of the survey. In other words: apprenticeship programmes figure in the data as a 'destination' of secondary school leavers - like 'working for payment or profit', 'unemployed' or (full-time third-level) 'student' – and not as a type of education left. To treat apprenticeship as a destination and not as a type of vocational upper secondary education agrees in itself more with the Irish and Scottish transition systems than with the Dutch, but the definition of the population in the surveys does not allow otherwise.

2. The quantitative importance of apprenticeship programmes in Ireland, Scotland and the Netherlands, 1980-1997

The development over the last two decades of the twentieth century of the percentage of school leavers in apprenticeships about one year after leaving secondary education shows resembling patterns for Ireland and Scotland (table 3): the proportion of apprentices decreased significantly between 1980 and 1985 (from 12.6 to 6.6% in Ireland, from 21.0 to 11.5% in Scotland), than remained relatively stable, and somewhat increased again towards the end of our time-series (more significantly in Ireland than in Scotland, but the last Scottish survey was two years earlier than in the other two countries).

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[3] See Schröder (2000) for a similar point on 'Youth Programmes'. See for instance CATEWE (1999), Braun & Müller (1997) and Steedman (1996) for a more general discussion on problems of educational definitions and classifications in comparative research.

Looking at the lines in figure 1a, we see for both countries a clear steadily rising line for the percentage of school leavers continuing in education. Moreover, in Ireland the curves representing 'working for payment or profit' and 'unemployed' form mirror-images, while the percentage in 'Youth programmes, Training and Employment schemes' more or less follows the developments in the percentage unemployed.[4] The apprenticeship curve seems relatively independent, and resembles the 'working' line closest, if any. In Scotland, on the other hand, the 'working for payment or profit' and 'apprenticeship' curves follow rather similar patterns, none of the other curves seems directly related to the percentage unemployed, and here the trends for 'apprenticeship' and 'Youth programmes, Training and Employment schemes' mirror each other. One should note that in 1979 most Scottish YOP (the predecessor of the YTS) programmes lasted only six months, so many school leavers would already have finished these by the time of the survey.

In the trends in the sub-division of the total 'active population' (all of the above categories minus 'students', figure 1b) and 'total working population' (active population minus unemployed, figure 1c), we also find that in Scotland the apprenticeship curve follows the 'working' curve, and mirrors the 'programmes and schemes' curve much more precisely than in Ireland. Since there is no national service in Ireland and Scotland, and 'other' is a relatively insignificant category (table 3), the size of the total 'active population' (working for payment or profit; apprentice; youth programmes, training and employment schemes; unemployed) decreases steadily as the percentage of school leavers continuing education rises. The 'total working population' obviously also decreases in relative size, but less linearly, because the general tendency is 'distorted' by unemployment fluctuations, heavier in Ireland than in Scotland. In both countries unemployment among school leavers was largely at the same level at the end of the period as at the starting point, but reached highs in 1985 and 1993.

Considering the shares of 'normal jobs', apprenticeships and 'programmes and schemes' *within* the total working population (figure 1c), we find a more stable

[4] An 'aggregate logic' similar to the "apprenticeship is good – look at youth unemployment rates in dual-system countries"-argument might lead to the conclusion that youth programmes, training and unemployment schemes *stimulate* unemployment.

pattern in Ireland than in Scotland. In *Ireland* the sub-percentage of school leavers 'working for payment or profit' is close to 80% for all years except 1985, when almost one-fifth (of the total working population) were in 'programmes and schemes'. In *Scotland* the sub-division of the working population over the three 'principal activity' categories fluctuates much more: the percentage of 'normal workers' varies between 39 (1989) and 63 (1979), of apprentices between 16 (1989) and 30 (1979), and of school leavers in 'programmes and schemes' between 7 (1979) and 45 (1989).

That 'programmes and schemes' appear to act more like communicating vessels with apprenticeship in Scotland, while in Ireland they correlate clearly with unemployment, is a function of the different characteristics of the category: more training programmes in Scotland, more employment schemes in Ireland. After the reconstruction of the Scottish YOP into the Youth Training Scheme (YTS) in the early eighties, training schemes became more widely available, in many cases as an alternative to apprenticeships (see EURYDICE/CEDEFOP, 1995; CEDEFOP, 1999). This development was in a sense institutionally confirmed after the time of the survey, in 1996, when the new Modern Apprenticeships were officially incorporated into the Skillseekers Programme, as the YTS is called since 1991 (see Schröder, 2000; PACEC, 1998).

In *the Netherlands* unemployment has been very low in comparison all through the 1990s, no training schemes as such exist and youth employment schemes, introduced in the early 1990s, have played a negligible role for school leavers, partly because of the favourable labour market situation and because eligibility for the programme requires having been unemployed for a period of six months (see Schröder, 2000; Pascual, 2000). In the Netherlands about one-fifth of all second-level leavers were in apprenticeship programmes in 1989 and 1993, but the percentage has dropped significantly since to less than fifteen percent in 1997. The decrease in the number of apprentices in the mid-1990s reflects certain negligence on the part of the educational bodies, employers and government and the ineffectiveness of policy measures to support apprenticeship programmes and ensure a sufficient supply of apprenticeship places.[5] It also reflects the increasing difference in status between

[5] See Borghans & Smits (1996) for an overview of developments in the Dutch apprenticeship system.

apprenticeship programmes and school-based vocational upper-secondary education (MBO) and the restructuring of the training systems for certain occupations (nurses for instance) from apprenticeship to school-based training with extensive periods of on-the-job practice.

In order to unify as well as flexibilise vocational education and training, but also to give new impetus to apprenticeship, the Dutch Education and Vocational Training Act (WEB) has significantly changed the organisation of vocational education. From August 1997 students in upper-secondary vocational education and training can choose at different levels between a track in which the emphasis lies on learning at school (the 'BOL' pathway, similar to former MBO) and a track which is primarily based on learning on-the-job. The latter, the 'BBL' pathway, is the successor of the apprenticeship route, although it is no longer called apprenticeship. Aim of the WEB-reforms was to offer both parallel routes for each subject in upper-secondary vocational education. In practice many occupational qualifications can still only be reached through one of the two (SER, 1999).

Although the trends for the Netherlands in the CATEWE data reflect real developments and are supported by statistics from the Dutch CSO (CBS, 2000) the exact percentages in figure 1 should be treated with some caution as the questions in the Dutch survey related to apprenticeship and the 'principal activity at the time of the survey' variable have changed over the years. Since not all changes could be corrected for, the resulting data are not fully consistent over time. Moreover, the 'time of the survey' itself has changed for the Netherlands, from Spring in the earlier years (about 10 months after leaving school for most leavers) to Autumn in 1997 (about 16 months after).[6] Most probably the percentages in figure 1a somewhat overestimate the real decrease in the proportion of school leavers in apprenticeship, which also seems to have reached its lowest point in 1997.

[6] The same change in 'timing of the survey' happened in Ireland at the same time, but whereas a comparison between principal activity in May and at the time of the survey shows minor changes for Ireland, the effect of the change in survey time in the Netherlands cannot be sufficiently established, as too many cases have missing values on principal activity in May.

3. The occupation of apprentices

EGP of apprentices

With regard to the (occupational) social class position of apprentices, *Ireland* fits the 'apprenticeship as a route to skilled manual jobs' picture best, and even more so now than two decades ago. The Irish data for 1980 in table 4 (and 5 and 6 below) are not fully comparable with the subsequent years, as they are based on a different occupational classification system (MANCO instead of the census 1981 and 1986 coding). This mainly concerns the distinctions between both routine non-manual classes and the 'semi-/unskilled manual workers' category, and the sudden drop in 'upper-routine non-manual' apprentices is partly related to coding changes. But the decrease in the share of lower-routine non-manual apprenticeships between 1989 and 1993 is real, and so is the rise in the percentage of Irish apprentices that are classified as skilled manual workers, from 80 percent in the early 1980s to 90 percent in the late 1990s (figure 2).

In *Scotland* the distribution of apprentices over EGP classes is much more diffuse and fluctuating (table 4). As in Ireland, most apprentices are in skilled manual jobs, but not as exclusively, and not increasingly so. The share of apprentices in skilled manual jobs declined between 1979 and 1989, rose to a high around 1993, than dropped again (figure 2). The proportion of apprentices in the service class topped in 1989; apprenticeship in lower technical / manual supervisory jobs disappeared after 1989; and the percentage of apprentices in semi-/unskilled manual occupations, decreasing slightly until the early 1990s, seemed to rise again since 1993. The only clear trend over the 1979-1995 period for Scotland that can be derived from table 4 is an increase in the proportion of apprentices in the routine non-manual class, from 5 percent in 1979 to 17 percent in 1995.

For *the Netherlands* the percentage of missing values for apprentices on the EGP variable is too high and too fluctuating over time[7] to analyse the remaining valid data, alone or in comparison with the total labour force or working population. The same is true for the ISCO-classification. Using the 1997 database Hartkamp and Rutjes (2000) found that apprenticeship in the Netherlands is much less restricted to the skilled manual class or 'craft and related trades' occupations than in Scotland and

[7] 49.2% valid values for 1989, 71.9% for 1993 and 78.9% for 1997.

especially Ireland. Unfortunately the time-series data does not allow an analysis investigating whether this relative variety and broad spectrum character of the Dutch apprenticeship system has increased or decreased in the 1990s, in absolute terms or in comparison with Ireland and Scotland. However, the changes *since 1997*, following the WEB-reforms, are likely to be far more significant than the developments between 1989 and 1997.

Share of apprentices within EGP classes

Looking at apprentices and EGP class 'row-wise' instead of 'column-wise', we find that in *Ireland* the share of apprentices has decreased in each major EGP class between 1980 and 1997, not only in the service and routine non-manual classes, but also in the manual workers categories. In 1980 apprentices accounted for 61% of all school leavers who were working as skilled manual workers (for 'payment or profit', as apprentice, or in 'youth programmes, training or employment schemes' – working students and 'others' are excluded), but their share dropped to 45% at the end of the 1980s and has been more or less stable since. Thus although apprenticeship in Ireland has become more and more limited to skilled manual occupations during the last two decades of the twentieth century (figure 2), it has in the same period ceased to be the main route to skilled blue collar jobs (figure 3).

This finding is not self-evident. Figures 1c and 2 may together suggest that the share of apprentices within the 'skilled manual working class' in Ireland should have risen between 1993 and 1997: apprentices account for a larger proportion of the 'total working population' (figure 1c), while the percentage of all apprentices that are trained in skilled manual jobs remains invariably high (figure 2). The reason for the apparent paradox lies in a significant change in the occupational structure of the Irish 'school-leavers labour market' as a whole in the period under study: between 1993 and 1997 the percentage of 'normal workers' that were in skilled manual jobs rose from 13 to 23 percent (table 4), and the overall size of the skilled manual class increased from 23 to 34 percent of the 'total working population' (figure 4). In the same period the category of semi-/unskilled manual workers shrank accordingly. The growth of the skilled manual class within the Irish labour market for young people who leave secondary education may from one side be explained by booming

manufacture and construction industries[8] - typical skilled manual sectors - and from the other by an increase of vocational qualifications.[9] More Irish leavers left the ET system with skills, and at the end of the 1990s the Irish economy could use these very well.

Since apprenticeship in *Scotland* is less limited to skilled manual jobs than in Ireland, especially towards the end of our time-series, it is no surprise to find that apprentices form more sizeable (albeit never large) shares of other occupational classes, most importantly the routine non-manual classes and semi-/unskilled manual workers. Following the overall proportion within the working population (figure 1c), the share of apprentices within these classes decreased (semi-/unskilled manual workers) or was stable until 1989, and has grown since (figure 3). Concerning the proportion of apprentices among all skilled manual workers, the directions of the developments are at any point in time the same as in Ireland, but the fluctuations are much larger. In the late 1970s and again in the early 1990s apprenticeship formed the main route to skilled manual occupations, but in 1989 less than one-third of all school leavers in skilled manual occupations were apprentices. In Scotland these fluctuations cannot be explained by changes in the occupational make-up of the 'school-leavers labour market' as a whole: the distribution of the 'total working population' over the EGP classes (figure 4) does not change much in the 1979-1995 period, except for a steady decline of the lower service class. But the relative share of 'normal workers', apprentices (figure 3) and 'trainees' within each EGP class varies significantly and so does the distribution of each category over EGP classes (table 4). There is much more movement between the three sub-categories of the 'total working population' than in Ireland. They seem closer to each other in content and their relative share seems to depend much on current rules, programmes and arrangements.

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[8] While the proportion of apprentices in manufacturing decreases, in construction it almost doubles between 1993 and 1997, from 23 to 42% of all apprentices (table not shown).

[9] The proportion of school leavers in 'normal jobs' who left upper-secondary vocational/academic programmes increased significantly between 1989 and 1993, then slightly decreased. This is also true for 'normal workers' in the manufacturing and in the construction industry. As we have seen, the proportion of 'normal workers' in skilled manual jobs only increased after 1993, and so did the proportion of skilled manual jobs within manufacture and construction. Perhaps the skills came earlier than the jobs, as Ireland went through a minor recession in the early 1990s (see figure 1a).

ISCO of apprentices

The trends described above on the basis of the EGP scale are to a certain extent reflected in the ISCO-88 classification.

In *Ireland* the percentage of apprentices working in crafts and related trades was stable during the 1980s, increased in the early 1990s, then decreased somewhat (table 5). In 1997 more than three-quarters of all apprentices were in crafts and related trades, slightly more than in 1980. However, the share apprentices form of all school leavers who are working and/or being trained in crafts and related trades has decreased, from 57 per cent in 1979 to 45 per cent in 1997 (table 6). The trends are similar to those shown above for the EGP-class of skilled manual workers, and so is the explanation: the total size of the occupational category (ISCO 7) has grown significantly in the mid-1990s, from 21 percent in 1993 to 30 percent in 1997 (table 7). Besides crafts there is only one other ISCO category in Ireland where a sizeable percentage of apprentices can be found: 'service workers and market sales workers' (ISCO 5). The significance of this category for apprenticeship increased strongly in the early 1980s but decreased again in the early 1990s. As opposed to crafts, apprentices never formed more than a very small proportion of all school leavers in service and market sales occupations: less than fifteen percent at the beginning of the period, less than ten at the end.

In *Scotland*, where apprentices are occupationally more diversely distributed, the ISCO trends for crafts and related trades also resemble the developments for skilled manual workers in the EGP classification above: the percentage of all apprentices that were in crafts decreased significantly from 1979 until 1989, then increased, and dropped again. The share apprentices form of all school leavers in crafts and related trades has fluctuated more heavily: in 1979 two-thirds of all crafts workers were apprentices, in 1989 less than one third, in 1995 61 per cent (table 6). The proportion of apprentices within the category increased since 1989 not because the category as a whole would have shrunken (table 7 shows the overall size of all occupational categories is rather stable in Scotland), but because the total number of trainees decreased and a smaller proportion of them went to craft occupations (table not shown). Around 1980 apprenticeship in Scotland was almost as limited to crafts as it was in Ireland, but since the early 1980s significant numbers of apprentices can also

be found in service and market sales occupations and in 1995 more than ten percent of all apprentices were clerks. But less than fifteen percent of all clerks (in the 'school leavers labour market' that is) are apprentices, and roughly one quarter of all service and market sales workers.

4. Conclusion

Towards the end of 1990s apprenticeship in Ireland was almost exclusively limited to skilled manual occupations (EGP) and to crafts and related trades (ISCO). The Scottish apprenticeship system was also rather 'focused', but to a lesser extent. In the Netherlands, however, the apprenticeship system covered a broad array of occupations and only one third of all Dutch apprentices were in skilled manual jobs. Due to this 'diffusion' and the existence of very occupation-specific school-based vocational education apprenticeship hardly ever formed the predominant route to a certain occupation in the Netherlands. In Scotland apprenticeship was the main route to crafts and related trades as a whole and to some occupations almost the only way. Although Irish apprenticeship was more limited to crafts, crafts were less limited to apprentices than in Scotland.

Studying the developments in apprenticeship in Ireland and Scotland from the early 1980s to the second half of the 1990s, we find that the 'occupational differences' were smaller at the beginning of the period: apprenticeship became somewhat more limited to crafts or skilled manual jobs in Ireland and significantly less limited in Scotland, where apprentices appeared in service and market sales occupations in the early 1980s and in clerk jobs in the early 1990s. Paradoxically in Ireland apprenticeship ceased to be the main route to skilled blue collar jobs even though a larger percentage of all Irish apprentices were found in these occupations. This is explained by the fact that the overall size of the skilled manual class in the 'school leavers labour market' in Ireland increased strongly toward 1997, due to a boom in manufacture and the construction industry and an increase of vocational qualifications: the Irish ET system provided more skills and the Irish economy employed these eagerly.

The structure of the Scottish youth labour market has been very stable in comparison with Ireland. But the way the labour is divided between apprentices, trainees and 'normal workers' has been fluctuating heavily in Scotland between 1979

and 1995. Whereas in Ireland the percentage of school leavers in 'youth programmes, training and employment schemes' largely seemed to follow unemployment rates and the apprentice percentage appears as rather independent, in Scotland the apprenticeship, training and 'normal work' categories seem communicating vessels, their shares going up and down depending on current rules and arrangements. Admittedly the 'youth programmes, training and employment schemes' is a very ambiguous category. In Ireland it covers more employment schemes, in Scotland training programmes that are not so far from apprenticeship.

The occupational trends in relation to apprenticeship could unfortunately not be analysed for the Netherlands because of the high percentage of missing values on EGP and ISCO in the Dutch data for 1989 and 1993 (there are no earlier time points in the data base). What can be said about the three countries is that at any time point in the table the percentage of school leavers in apprenticeships was higher in the Netherlands than in Scotland, and higher in Scotland than in Ireland. The development in number of apprentices shows similar curves for Ireland and Scotland, with a steep fall in the early 1980 and a slow rise towards the end of the1990s, but the fall was deeper in Scotland and the rise less clear. Because of this, and because the percentage of apprentices in the Netherlands dropped heavily in the mid-1990s, in numbers of apprentices the three countries were much closer to each other towards the end of the 1990s than they were in 1989. On this point Ireland and Scotland were also much closer than in 1980, even though the occupational make-up of their apprenticeship systems diverged.

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Table 1: Occupational Class (EGP) of Apprentices, 1995/1997*

	Ireland 1997	Scotland 1995	Netherlands 1997	France 1995
I - Upper service class	0.5	1.5		
II - Lower service class	1.4	2.8	4.4	4.4
IIIa – Upper routine non-manual	1.4	11.8	14.6	**24.7
IIIb – Lower routine non-manual	4.2	4.8	18.6	**
IVa – Small proprietors	0.5			
IVb - Self-employed	0.5			
IVc – Farmers			0.1	0.2
V - Lower tech./manual supervisory	0.5		3.3	0.6
VI – Skilled manual workers	88.9	64.5	33.7	21.5
VIIa – Semi-/unskilled manual w.	1.4	14.0	19.4	47.1
VIIb – Agricultural workers	0.9	0.8	5.9	1.4
Total	100.0	100.0	100.0	100.0
N	216	400	1034	497

*Data in all tables and figures refer to position of second level system leavers at the time of the survey, i.e. 1-1.5 year after leaving full-time secondary education.
**France IIIa/IIIb = III (no distinction coded)

(source: Hartkamp and Rutjes, 2000)

Table 2: Occupational Position (ISCO) of Apprentices, 1995/1997

	Ireland 1997	Scotland 1995	Neth. 1997	France 1995
1 – Legislators, senior officials and managers	**1.4**	**1.2**	**0.2**	
2 – Professionals	**1.4**	**2.7**	**0.1**	**0.2**
3 – Technicians and associate professionals	**1.8**	**4.0**	**16.6**	**4.8**
32 - Life science and health associate professionals		0.2	13.0	4.0
323 – nursing and midwifery associate professionals			*10.4*	
4 – Clerks		**11.2**	**4.0**	**3.4**
41 – Office clerks		10.5	2.7	2.8
419 – other office clerks		*5.2*	*0.3*	*0.4*
5 – Service workers and market sales workers	**14.7**	**18.7**	**22.5**	**33.0**
51 – Personal and protective services workers	12.8	17.0	11.3	20.5
512 – housekeeping and restaurant service workers	*3.7*	*3.0*	*3.4*	*9.8*
513 – personal care and related workers		*2.2*	*7.2*	*0.8*
514 – other personal service workers	*9.2*	*11.7*	*0.6*	*10.0*
52 – Models, salespersons and demonstrators	1.8	1.7	11.2	12.4
522 – shop, stall and market salespersons and demonstrators	*1.8*	*1.7*	*11.2*	*12.4*
6 - Skilled agricultural and fishery workers		**2.0**	**5.1**	**2.8**
61 – Skilled agricultural and fishery workers		2.0	5.1	2.8
7 - Craft and related trades workers	**77.1**	**55.2**	**33.5**	**46.7**
71 – Extraction and building trades workers	16.5	28.4	17.5	20.1
712 – building frame and related trades workers	*2.8*	*14.4*	*9.2*	*6.4*
713 – building finishers and related trades workers	*11.5*	*9.0*	*4.7*	*13.2*
714 – painters, building structure cleaners and related tr.w.	*1.8*	*5.0*	*3.6*	*0.6*
72 - Metal, machinery and related trades workers	34.4	22.2	11.5	14.5
720 – metal, machinery and related trades workers				*9.8*
721 – metal moulders, welders, sheet-metal workers etc.	*6.9*	*4.0*	*2.1*	*1.0*
723 – machinery mechanics and fitters	*13.3*	*11.4*	*4.7*	*2.6*
724 – electrical and electronic equipment mechanics and fitters	*14.2*	*5.5*	*4.0*	*0.8*
73 – Precision, handicraft, craft printing and related tr.w.	5.0	2.2	0.6	0.2
74 - Other craft and related trades workers	21.1	2.5	3.8	11.0
741 - food processing and related trades workers		*1.7*	*3.5*	*11.0*
742 – wood treaters, cabinet-makers and related trades workers	*20.2*	*0.2*	*0.1*	
8 - Plant and machine operarors and assemblers	**1.4**	**3.0**	**7.4**	**8.0**
82 – Machine operators and assemblers	1.4	1.7	3.5	6.6
83 – Drivers and mobile plant operators		1.0	3.3	0.4
9 – Elementary occupations	**2.3**	**2.0**	**10.7**	**1.0**
91 - Sales and services elementary occupations		0.5	6.5	0.8
913 – domestic and related helpers, cleaners and launderers			*6.2*	*0.8*
93 – labourers in mining, construction, manufacturing and trade	1.4	1.0	3.8	0.2
Total	**100.0**	**100.0**	**100.0**	**100.0**
N	**218**	**402**	**1164**	**497**

(shown: all 1 digit groups,
2 digit groups with >= 3.0% in at least one country,
3 digit groups with >=5.0% in at least one country)

(source: Hartkamp and Rutjes, 2000)

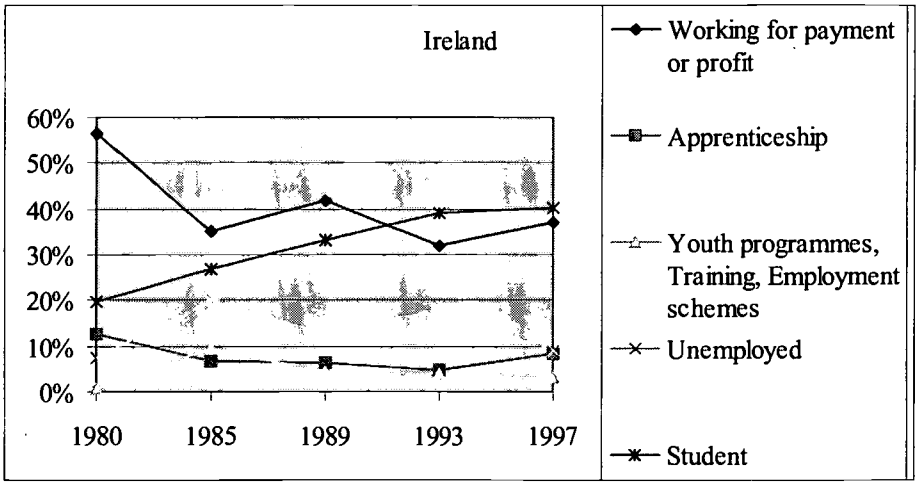
Table 3: Principal Activity of School Leavers, 1980-1997

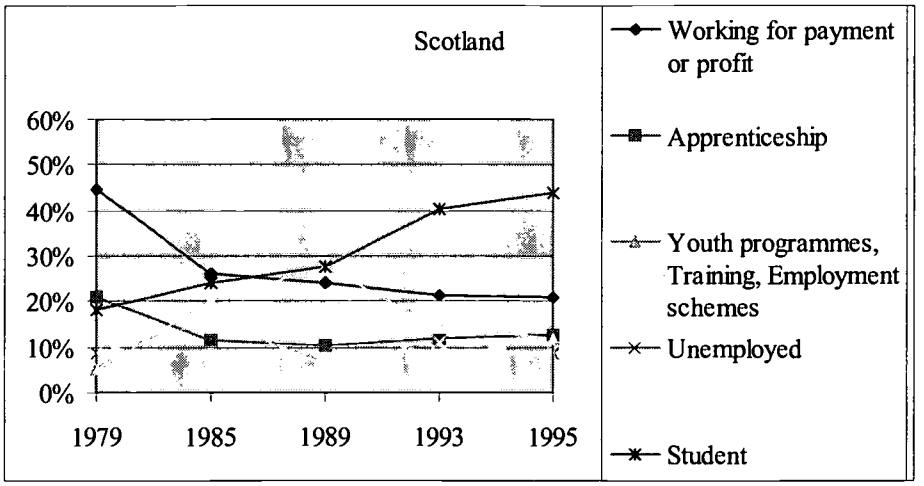
Ireland	1980	1985	1989	1993	1997
Working for payment or profit	56.6	35.3	41.7	32.1	37.3
Apprenticeship	12.6	6.6	6.5	4.7	8.2
Youth programmes, Training, Employment schemes	0.8	9.3	4.2	3.9	3.0
Unemployed	7.6	20.7	12.9	18.6	9.2
Student	19.9	26.8	33.2	39.2	40.2
National service					
Other	2.5	1.3	1.5	1.6	2.1
Total	100.0	100.0	100.0	100.0	100.0
n	3404	2067	1987	2192	2654

Scotland	1979	1985	1989	1993	1995
Working for payment or profit	44.4	26.2	24.0	21.3	21.1
Apprenticeship	21.0	11.5	10.1	11.6	12.6
Youth programmes, Training, Employment schemes	5.2	20.2	27.5	14.1	11.7
Unemployed	8.8	15.4	6.5	11.0	8.5
Student	18.1	24.0	27.5	40.2	43.9
National service					
Other	2.5	2.7	4.3	1.8	2.2
Total	100.0	100.0	100.0	100.0	100.0
n	5948	5518	4753	3641	3192

Netherlands			1989	1993	1997
Working for payment or profit			37.6	29.9	47.3
Apprenticeship			21.4	20.5	13.8
Youth programmes, Training, Employment schemes				1.4	0.8
Unemployed			3.8	4.1	2.6
Student			24.1	34.7	34.3
National service			7.9	7.1	
Other			5.2	2.3	1.2
Total			100.0	100.0	100.0
n			16236	17728	11488

Figure 1a: Principal Activity of School Leavers, 1980-1997 (%)





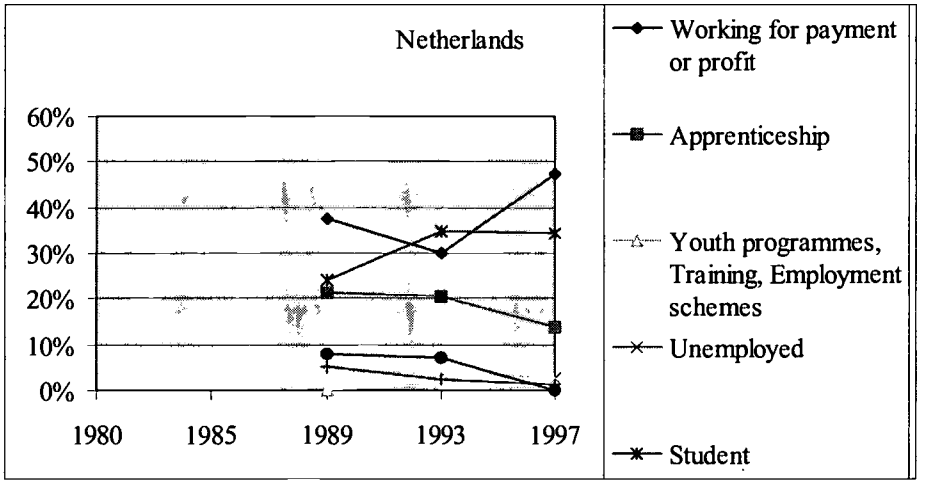


Figure 1b: Principal Activity of School Leavers, 1980-1997 - Active Population

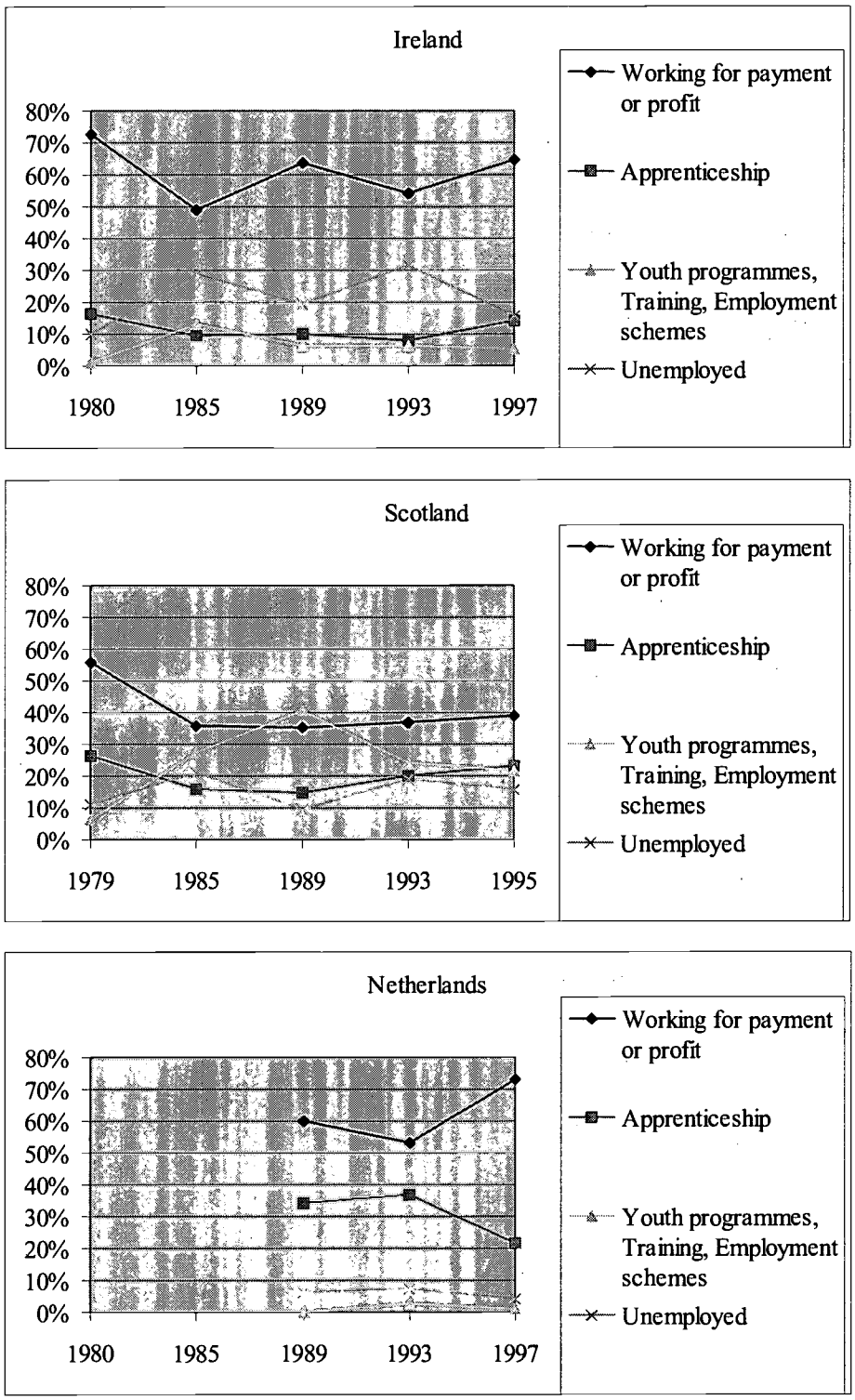
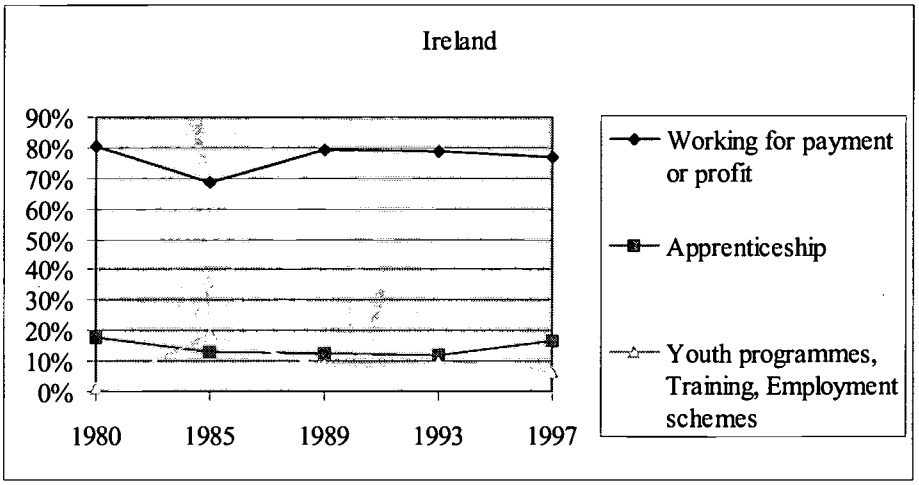
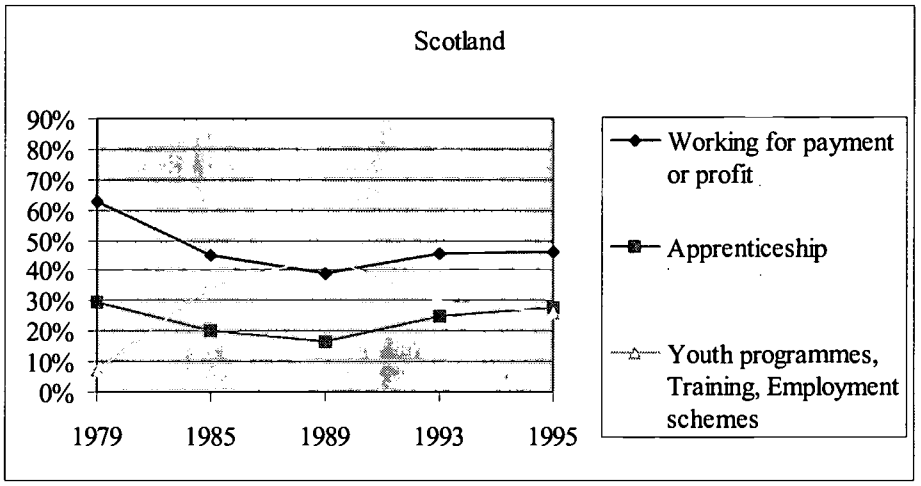


Figure 1c: Principal Activity of School Leavers, 1980-1997 - Working Population





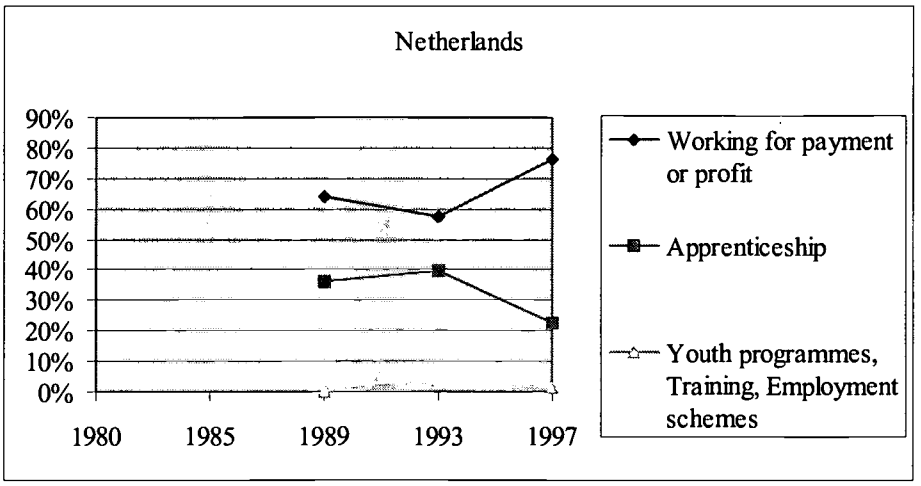
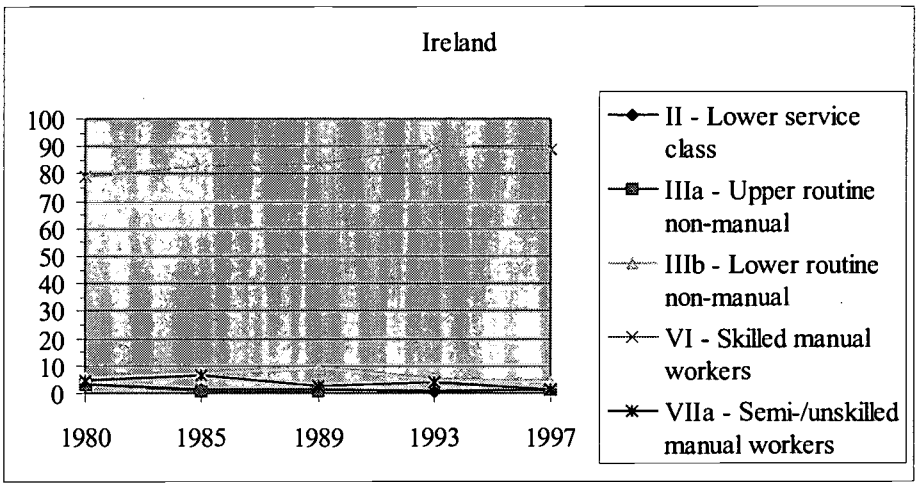


Figure 2: Social Class Position (EGP) of Apprentices, 1980-1997 (%)



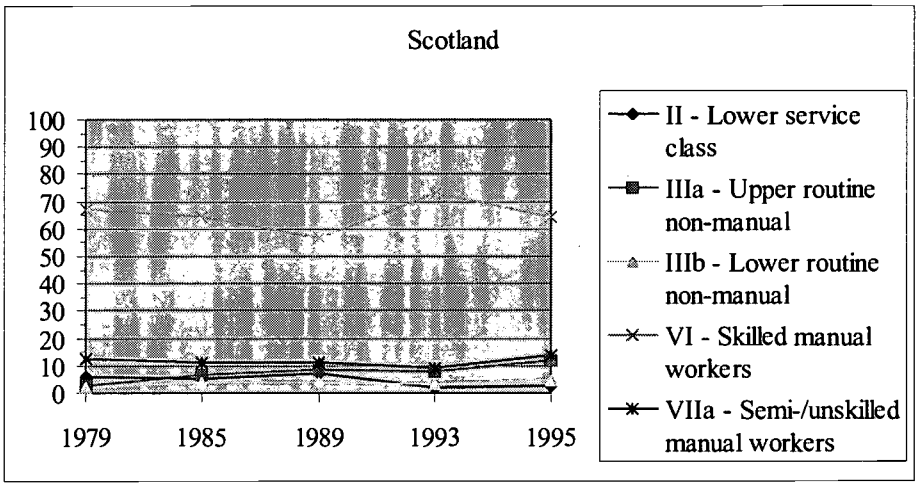
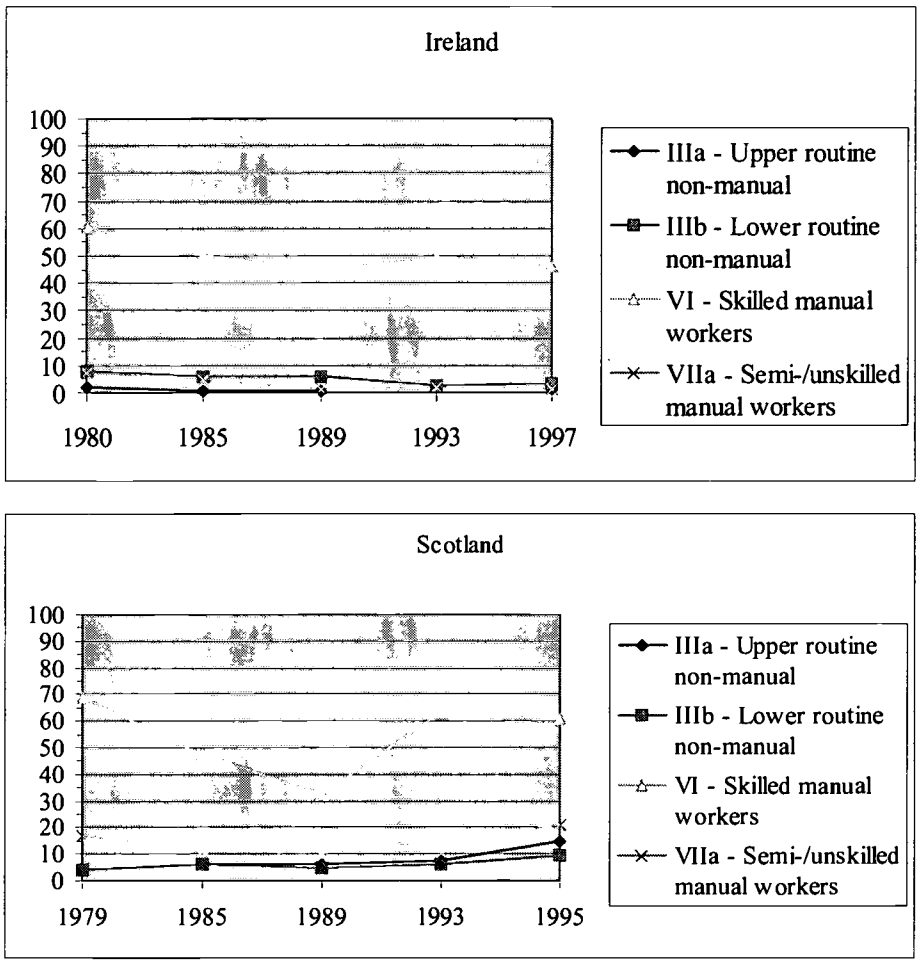


Figure 3: Proportion Apprentices of the Total Working Population* by EGP class, 1980-1997 (%)



*Total working population = school leavers 'working for payment or profit', apprentices or in 'youth programmes/training/employment schemes' at the time of the survey.

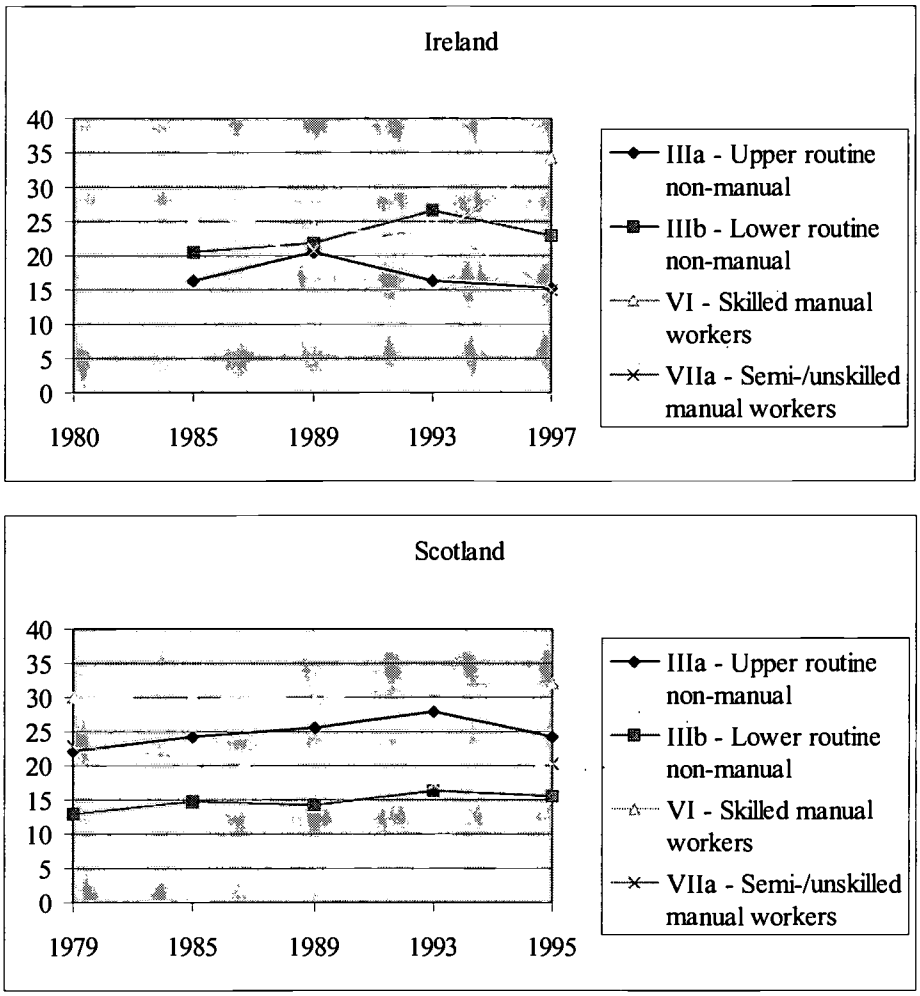
Table 4: Social Class Position (EGP) of School Leavers by Principal Activity*, 1980-1997 (%)

Ireland	1980		1985		1989		1993		1997	
EGP Scale of Social Class Position	Work	**Appr.**	Work	**Appr.**	Work	**Appr.**	Work	**Appr.**	Work	**Appr.**
I - Upper service class	1.2	**2.1**	0.8		0.6	**1.6**	0.3		0.3	**0.5**
II - Lower service class	8.3	**3.5**	7.8	**1.5**	6.3	**1.6**	4.8	**1.0**	5.7	**1.4**
IIIa - Upper routine non-manual	44.0	**3.5**	19.2	**0.7**	23.7	**0.8**	18.3		18.3	**1.4**
IIIb - Lower routine non-manual	16.2	**6.1**	23.0	**7.5**	24.0	**9.4**	30.0	**4.9**	27.3	**4.2**
IVa - Small proprietors	0.3	**0.5**	0.7	**0.7**	0.5	**0.8**	0.6		0.5	**0.5**
IVb - Self-employed	0.4		0.4		0.1		0.7		1.3	**0.5**
IVc - Farmers	0.5	**0.2**	0.6		0.1		0.1		0.2	
V - Lower technical / manual supervisory workers	0.8	**0.2**	0.3		0.6		0.3		1.5	**0.5**
VI - Skilled manual workers	11.4	**79.2**	15.5	**82.8**	15.6	**83.5**	13.2	**90.2**	22.6	**88.9**
VIIa - Semi-/unskilled manual workers	13.1	**4.4**	25.3	**6.7**	23.2	**2.4**	26.9	**3.9**	18.2	**1.4**
VIIb - Agricultural workers	3.7	**0.2**	6.4		5.2		4.7		3.9	**0.9**
Total	100.0	**100.0**	100.0	**100.0**	100.0	**100.0**	100.0	**100.0**	100.0	**100.0**
Count	1864	**427**	708	**134**	826	**127**	703	**102**	981	**216**

Scotland	1979			1985			1989			1993			1995		
EGP Scale of Social Class Position	Work	**Appr.**	*YPTES*	Work	**Appr.**	*YPTES*	Work	**Appr.**	*YPTES*	Work	**Appr.**	*YPTES*	Work	**Appr.**	*YPTES*
I - Upper service class	0.7	**2.6**		0.2	**0.3**		0.2	**5.0**	*1.4*	0.6	**2.1**	*1.2*	0.9	**1.5**	
II - Lower service class	4.5	**6.1**	*2.5*	4.5	**5.3**	*1.2*	4.9	**7.1**	*2.0*	2.2	**2.1**	*2.2*	2.9	**2.8**	*1.7*
IIIa - Upper routine non-manual	32.3	**2.8**	*13.9*	33.8	**6.5**	*22.7*	39.5	**8.7**	*19.6*	38.2	**7.6**	*32.2*	29.3	**11.8**	*30.6*
IIIb - Lower routine non-manual	17.8	**1.7**	*17.2*	18.1	**4.2**	*17.4*	15.6	**4.0**	*17.2*	23.5	**3.6**	*18.2*	20.2	**4.8**	*20.6*
IVa - Small proprietors															
IVb - Self-employed															
IVc - Farmers	0.3	**0.1**	*0.4*								**0.2**	*0.8*	0.4		*0.3*
V - Lower technical / manual supervisory workers	3.0	**3.6**	*1.2*	3.9	**5.2**	*0.7*	4.7	**5.2**	*1.2*	1.4	**1.9**	*0.8*	1.3		*1.1*
VI - Skilled manual workers	12.4	**67.3**	*23.8*	10.5	**64.5**	*34.9*	10.4	**56.5**	*36.4*	7.8	**72.9**	*25.5*	13.1	**64.5**	*25.6*
VIIa - Semi-/unskilled manual workers	26.4	**12.6**	*38.5*	26.0	**11.0**	*20.5*	21.8	**11.4**	*17.9*	23.6	**9.3**	*15.7*	27.7	**14.0**	*15.6*
VIIb - Agricultural workers	2.6	**3.2**	*2.5*	2.9	**2.9**	*2.6*	3.0	**2.1**	*4.2*	2.7	**0.2**	*3.3*	4.3	**0.8**	*4.7*
Total	100.0	**100.0**	*100.0*	100.0	**100.0**	*100.0*	100.0	**100.0**	*100.0*	100.0	**100.0**	*100.0*	100.0	**100.0**	*100.0*
Count	2513	**1221**	*244*	1291	**617**	*886*	1117	**481**	*1233*	631	**420**	*490*	559	**400**	*360*

*Principal activity (at the time of the survey):
Work = 'working for payment or profit'
Appr. = apprentice
YPTES = in Youth Programme, Training, Employment Scheme

Figure 4: Distribution of Total Working Population* over Social Class (EGP) (%)



*Total working population = school leavers 'working for payment or profit', apprentices or in 'youth programmes/training/employment schemes' at the time of the survey.

Table 5: Occupation (ISCO-88) of Apprentices, 1980-1997(%)

	Ireland					Scotland					Netherlands		
	1980	1985	1989	1993	1997	1979	1985	1989	1993	1995	1989	1993	1997
1 - Legislators, senior officials and managers	1.4	0.7			1.4	0.2	0.3	1.2	0.5	1.2	0.3	0.1	0.1
2 - Professionals	3.3	0.7	2.4	1.0	1.4	4.2	2.8	8.3	2.1	2.7	0.8	1.5	0.1
3 - Technicians and associate professionals	1.4	0.7	1.6		1.8	6.5	4.1	5.6	4.3	4.0	24.0	19.8	15.0
4 - Clerks	4.0					3.7	7.6	6.4	6.9	11.2	2.0	3.3	4.4
5 - Service workers and market sales workers	12.4	22.2	20.5	12.7	14.7	8.2	18.5	16.0	18.3	18.7	21.4	23.2	23.0
6 - Skilled agricultural and fishery workers						1.3	1.3	1.5	2.4	2.0	0.2	0.2	5.0
7 - Craft and related trades workers	73.0	71.1	72.4	85.3	77.1	68.1	59.2	52.4	60.5	55.2	40.9	41.7	32.5
8 - Plant and machine operators and assemblers	3.8	1.5	0.8	1.0	1.4	3.9	2.6	4.4	3.3	3.0	3.3	4.4	6.8
9 - Elementary occupations	0.7	3.0	2.4		2.3	3.9	3.7	4.2	1.7	2.0	7.1	5.9	13.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Count	426	135	127	102	218	1219	617	481	420	402	1715	2619	1377

Table 6: Proportion Apprentices of the Total Working Population* by ISCO category, 1980-1997 (%)

	Ireland						Scotland						Netherlands			
						*% in class***						*% in class**				*% in cl**
	1980	1985	1989	1993	1997	*mean*	1979	1985	1989	1993	1995	*mean*	1989	1993	1997	*mean*
1 - Legislators, senior officials and managers	20.0	8.3			14.3	*1.2*	10.7	10.5	21.4	5.9	31.3	*1.2*	9.3	2.0	0.9	*1.8*
2 - Professionals	8.4	1.9	6.0	3.3	6.4	*5.2*	33.6	28.3	40.4	33.3	55.0	*2.5*	6.2	27.1	2.7	*1.8*
3 - Technicians and associate professionals	17.1	5.0	8.7		12.1	[illegible]	52.3	32.9	27.8	21.4	22.2	[illegible]	19.3	35.8	17.2	[illegible]
4 - Clerks	1.9					[illegible]	4.7	6.3	3.9	6.7	13.6	[illegible]	6.3	6.8	7.1	[illegible]
5 - Service workers and market sales workers	14.2	12.8	9.6	4.6	9.1	[illegible]	14.0	18.9	13.3	24.8	26.4	[illegible]	18.1	31.8	20.9	[illegible]
6 - Skilled agricultural and fishery workers						*0.7*	27.6	18.2	11.1	31.3	21.1	*2.1*	18.8	66.7	19.1	*2.0*
7 - Craft and related trades workers	57.3	48.0	47.2	50.9	45.8	[illegible]	65.2	44.3	31.9	57.9	60.7	[illegible]	46.9	59.6	41.8	[illegible]
8 - Plant and machine operarors and assemblers	16.0	6.9	1.9	2.2	4.3	[illegible]	21.2	11.9	17.5	23.0	15.0	[illegible]	19.4	36.6	18.2	[illegible]
9 - Elementary occupations	1.6	2.2	1.7		3.3	[illegible]	11.2	8.1	7.7	5.9	7.1	[illegible]	16.7	16.4	29.6	[illegible]
Total	18.4	15.5	13.1	12.5	17.8	*100.0*	30.7	22.1	17.0	27.3	30.5	*100.0*	22.8	32.9	21.6	*100.0*
n (working, apprentice, in programmes and schemes)	2319	869	967	819	1220		3975	2793	2830	1538	1318		7528	7954	6378	

*Total working population = school leavers 'working for payment or profit', apprentices or in 'youth programmes/training/employment schemes' at the time of the survey.
**% in class mean: mean of the total size of the ISCO class (the % of the total working population that falls in the ISCO class) (see table 7)

Table 7: Distribution of the Total Working Population over ISCO categories, 1980-1997 (%)

	Ireland						Scotland						Netherlands			
	1980	1985	1989	1993	1997	mean	1979	1985	1989	1993	1995	mean	1989	1993	1997	mean
1 - Legislators, senior officials and managers	1.3	1.3	0.9	0.9	1.7	1.2	0.7	0.7	1.0	2.2	1.2	1.2	0.7	1.2	3.4	1.8
2 - Professionals	7.2	6.2	5.1	3.7	3.8	5.2	3.8	2.1	3.5	1.7	1.4	2.5	3.0	1.8	0.6	1.8
3 - Technicians and associate professionals	1.5	2.3	2.4	1.3	2.8	2.1	3.8	2.7	3.4	5.4	5.4	4.2	28.3	18.2	18.7	21.8
4 - Clerks	37.6	15.2	19.1	15.3	14.7	20.4	23.9	26.8	28.0	28.2	25.1	26.4	7.4	15.9	13.5	12.3
5 - Service workers and market sales workers	16.0	26.9	27.9	34.3	28.7	26.8	18.0	21.6	20.5	20.2	21.5	20.4	26.9	24.0	23.7	24.9
6 - Skilled agricultural and fishery workers	0.5	1.2	0.7	0.9	0.2	0.7	1.5	1.6	2.2	2.1	2.9	2.1	0.2	0.1	5.7	2.0
7 - Craft and related trades workers	23.5	23.0	20.2	20.9	30.0	23.5	32.1	29.5	27.9	28.5	27.8	29.1	19.9	23.0	16.8	19.9
8 - Plant and machine operarors and assemblers	4.3	3.3	5.4	5.5	5.6	4.8	5.7	4.8	4.2	3.9	6.0	5.0	3.9	4.0	8.0	5.3
9 - Elementary occupations	8.2	20.6	18.3	17.3	12.6	15.4	10.5	10.2	9.2	7.7	8.6	9.2	9.7	11.8	9.6	10.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
n	2319	869	967	819	1220		3975	2793	2830	1538	1318		7528	7954	6378	

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Gender and qualification
Are gender differences ignored?

Presentation on European conference on educational research (ECER), 08.09.2001 in Lille

1 Introduction

The presentation is based on the European project

GENDER AND QUALIFICATION - GENDERQUAL -

TRANSCENDING GENDERED FEATURES OF KEY QU ALIFICATIONS
FOR IMPROVING OPTIONS FOR CAREER CHOICE
AND ENHANCING HUMAN RESOURCE POTENTIAL

Fifth Framework Program
01.02.2000 – 31.03.2002

Co-ordinator:
University of Flensburg, Germany: biat – Berufsbildungsinstitut Arbeit und Technik
Partners:
Academus Lda., Evora, Portugal
University of Surrey, Great Britain: Department of Educational Studies
University of Patras, Greece
University of Jyväskylä, Finland: Department of Educational Studies

To clarify misunderstandings right at the beginning I will give some comments to the word "key qualification".

I will use the words key- qualifications and key-competencies as synonyms. What is meant are abilities which are transferable to different occupational and non -occupational situations. These "transferable abilities" can be divided into *three competence-areas*:

factual competence, self-competence and *social competence* (cf. Roth 1966, Reetz 1989 a, b).

And each can be explained by *five perspectives*:

capacity for work, individual, society, cognition and *activity* (cf. Simuleit / Feldhoff / Jacke 1991, Kaiser 1992).

Through this the phenomenon "key- qualification" is viewed in its entirety.

The presentation is lead by the two main intentions of the project, namely

- to investigate the impact of gender segregation of European labour markets on vocational education and training and
- to investigate to which extend women and men tend to develop different sets of key qualifications in situations of vocational training and occupational change.

The project aims are recommendations for policy makers and practitioners containing ideas

- to reduce gender segregation in the labour market

- to prepare for situations of occupational changes

in view of key qualifications.

At the current state of art we found, that it is not very easy to extrac t key competencies and their connection to gender. Our expectation was to get quite a number of abilities, qualifications or competencies which have key functions and which are characteristic for women and men in their jobs. In the German case statements referring to this subject were rather scarce.

I will discuss this outcome by some aspects appearing during the report.

2 Investigation of the impact of gender segregation of European labour markets on vocational education and training

It turned out, that the gender segregation of the European labour markets – in case of our research target groups - has an important impact of the vocational education and training. The gender segregation of the labour market is reproduced in the vocational education and training. This common statement does not only go for Germany but for each participating country. But the next statements only refer to the German cases.

For example:

Electrician is a nearly 100 % male dominated occupation and in the vocational education and training institute co-operating in our research the image was similar: there were no female apprentices.

Nursery nurse is a nearly 100 % female dominated occupation and in the co -operating vocational education and training institute there were 22 female students and only two male students. But these two boys don't want to enter the labour market as nursery nurses in a kindergarten but intend to continue their education for a higher degree.

Waiters/waitresses is a rather mixed occupation concerning male and female employees. The distribution isn't 50 % to 50 %, but - above all in the serving sector – 60 to 70 % women and 30 to 40 % men. The same distribution could be found in the vocational education and training but the proportion of male apprentices is lowering during the last years.

I will try to explain these outcomes by three aspects: (1.) Occupational choice, (2.) Advertising, reports and information about the occupations and (3.) General opinion and attitudes.

2.1 Occupational choice

Our interviews confirm the influence of the social situation "labour market" on the individual situation "occupational choice".

Most of the interview partners chose their occupations due to former experiences in their families or their social environment (father/mother have the same occupation, parents have a respective enterprise, caring for younger brothers or sisters or children of the neighbourhood in case of nursery nurses etc.). Intensive reflections about specific demands of the occupations and how those fit to personal competencies were rather scarce. Dominant were social models.

2.2 Advertising, reports and information of occupations

Brochures from schools and enterprises about occupa tions and information from the labour government only provide factual information about prerequisites, demands and contents of the occupations. They do not address

young men and women in a personal way or even address them with respect to their individual power or even with respect to overcome gendered structures of occupations (e.g. women as electricians). Gender doesn't seem to be a subject in these documents.

2.3 General opinion and attitudes

Questions about "which occupation fits to men and women", "are men better electricians than women", "can men be good nursery nurses" etc. showed two groups of opinions:
Group A holds the opinion that there are clear differences between the sexes concerning occupational abilities, **group B** holds the opinion that there are no or must not be differences between the sexes with respect to successfully working in every occupation.

Group A is the biggest one in our research. It can be divided into two subgroups.
Firstly the **extreme subgroup** - most of group A - representing the opinion that only men can be good electricians and women are much better in caring for children in a kindergarten.
Secondly the **moderate subgroup** - some of group A - holding the above opinion, too but adding that times are changing and that it could be different but they themselves could not really imagine.

Group B is the smaller group in our research and represents the opinion that there are no differences between the sexes and if one is really interested in an occupation gender would be no obstacle.

Looking at the bigger group A it can clearly be seen that the gender distribution of the labour and VET market has great impact on the general opinion and attitudes: the interviewees cannot imagine that the occupations could be practised differently in view of gender. And they even cannot imagine that today's male occupations can perhaps better be practised by women and vice versa.

Having in mind that the influence goes also the other way round - namely that gender distribution of the labour and VET market depends on the general opinion and attitudes it can be seen through our research outcomes that the system successfully stabilises itself. People cannot imagine another distribution.

This assumption is supported by the outcome, that most of the interviewees had clear images of this distribution - irrespective of group A or B - but they had difficulties to explain or to give reasons for their opinion. They answered like "perhaps this or perhaps that" or "I cannot imagine" or just "I don't know". This again is an indication for unreflective description of status quo. Pe ople cannot explain the social situation. People seem to be influenced by common clichés.

These features also were independent of the affiliation (membership) of the different occupations. Even if the interviewees were knowledgeable about their own occupations the opinions did not differ from the opinions of those interviewees without great knowledge. The opinions were more general than differentiated and represented either group A or group B.

We know that clichés have a momentum, an independent existence. But it is astonishing that while reflecting some cliché and thinking of well known occupations and its contents or of well known employees the unspecified cliché is so dominant that firstly justifications are difficult and secondly the cliché is taken on.

In this context I will mention a research of the Allensbacher opinion research institute in Allensbach/Germany of last year. The institute made a research about what is typical female and typical male. They found great differences between the clichés of men and women - called "far images" - and so called "near images" of women and men who are well known by the interviewees. The near images of men in view of women and of women in view of men were much better than the far images. The differences were up to 30 to 40 %points. This research shows that while the clichés are still existing, the personal opinion with respect to well known others can be very different.

In our research the clichés of gender distribution in the occupations seem to be more stabile (because it is independent of the affiliation of the occupations and the knowledge about the occupation, demands, contents etc.). Reasons for this can be

- People often structure occupations by gender instead of personal abilities due to cultural history .
- People are lacking in awareness of gender segregation in the labour market which is not founded on facts.
- The common cliché is very much stronger than personal experiences or ideas.

2.4 *Sources to overcome the cliché*

As we heard before not everybody follows the cliché.

There is **group B**, interviewees who hold the opinion, that there must not be a difference between women and men in practising an occupation. Again it is astonishing that this opinion is independent of the af filiation of the occupation. There can be some interpretations for this attitude:

- these interviewees are more open for social options
- they structure their opinion or attitude in another way: it is not orien ted to gender but to interests, abilities and competencies
- they do not know the cliché about gendered occupations or its extend due to personal experiences (e.g. they know many of male nursery nurses or educators)

Group B and of course the moderate subgroup of group A who is aware of societal changes show the possibility to overcome common attitudes and values. There only have to be opportunities to perform in other ways, e.g. to become a female electrician.

Another source of overcoming the cliché is the before mentioned occupational choice which was dependent on the experiences in the families or the near social environment of most of our interviewees. Through these experiences young people can find their interests and competencies and perhaps their occupation wish beyond gender. This happened to one of our exceptions, a female electrician, who`s parents had an electrician enterprise.

It seems that gender and competencies or key competencies are opponents in view of occupations. The cliché is based on prejudices against men`s or women`s suitability for occupations (so gender) and stops reflecting about personal abilities and key competencies.

The next part of the presentation will deal with key qualifications.

At the end this part will lead to questions about interpreting our data.

3 Investigation to which extend women and men tend to develop different sets of key qualifications in situations of vocational training and occupational change

As mentioned before opinions about the suitability of men and women for occupations couldn`t easily be specified by the interviewees. In the observations women and men actually showed different behaviour, different competencies and qualifications, but these were due to the different demands of the jobs. We could not extract selective key qualifications in between the occupations in view of female and male workers nor between the male or female dominated or gender mixed occupation.

But we got a few state ments about women`s and men`s performances at their worksites. To give a short insight - and because there are not so many of them - I will list up a summary of often mentioned competencies. These competencies were mentioned in addition to occupation specific (key -)competencies, like caring for children (nursery nurses), dealing with electricity (electricians) etc. The competencies or features were mostly mentioned with respect to each occupation, so they are independent of the specific and different demands of the three occupations we had chosen for our research.

Women are said to have better nerves, to be more patient and they are said to work (and think and plan) more precise. Women should be more friendly and - this was only said in view of waitresses - should work harder, more industrious and more reliable than waiters.

Men are said to make more success of things and they are said to have more technical awareness, interest and competence.

These descriptions agree with the common descriptions of male and female competencies or key competencies.

4 Conclusion

It can be said that our research is a confirmation of the existing theory about key competencies and gender , which is really scarce in Germany up to now.

But it must be objected that it was not general, that the interviewees mentioned female and male key competencies. As said before many of them couldn`t specify their common opinion and others hold the opinion that there are no differences.

But many questions arise by trying to interpret these outcomes.

1. Can those competencies be defined as key competencies in view of our description or definition mentioned before?
2. Are these (key) competencies results of development in situations of vocational training or on the job as was assumed in the project plan? Isn`t it more conceivable that the apprentices and employees had these competencies anyway because they are either men or women?
3. Are there other important key qualifications which have not been mentioned?
4. Why is there a majority of our research target group which either cannot specify their assumed differences between men and women or hold the opinion that there are no differences?
5. Do interviewees – perhaps group B or the moderate subgroup of group A - answer according to social expectations?
6. How can key qualifications be trained in VET if there is no awareness for their importance?
7. Is it really possible to work out strategies of qualification for both sexes allowing to overcome inequalities in the labour market and to improve employability?
8. ???
9. ???

In my view it can be seen, that in addition to the unawareness of key qualifications the subject key competencies and gender is less aware in labour and VET market. The employees and above all the apprentices seem to be not aware of their own key competencies. Teachers and trainers seem to disregard the connection between gender and key competencies and the opportunities to support these competencies and to use the chance of mutual learning of young men and women. Differences between the sexes in view of competencies seem to be ignored.

5 Prospect

These outcomes provide ideas for changing the situation .

- Rising the awareness of gender specific key competencies by reports, conferences, training etc.

- Developing didactical (e.g. educational subject for men and technical subject for women) and methodological (e.g. teamwork of women and men and reflection afterwards) models for mutual learning of male and female students.
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From normatively constructed identity to new identities in the contexts of "double" transition processes. The case of Estonia Krista Loogma, Sofia Joons, Raivo ViluPaper for the ECER Conference in Lille, September, 5-9, 2001

Introduction

The paper we would like to present, is a part of research carried out in the framework of the 5th Framework Programme Research Project FAME - "Vocational identity, flexibility and mobility in the European labour market".The aim of the authors in the paper is to explain and describe the institutional and cultural changes taking place in the context of the so called "double" transition process that occurred in Estonia and other Central- and East- European (CEE) countries in the end on the 1980s.In this paper, we will also describe and explore parallel processes that can be recognised in the context of the development of work-related (vocational/occupational) identities, values and norms driven by democratisation and marketisation processes at the economic sector level.

The empirical data representing employers' view on the work identity related processes in the IT and health care sectors will be presented.

1. Main features of the identity formation processes in "soviet time"

Normatively constructed identityStrong ideological pressure and censorship led to the result that work-related discourses, incl. the meaning of the work, work values, performance etc. were normatively (primarily proceeding from ideological considerations) constructed and formed the "official" discourses. According to "Official discourses" work in the conditions of developed/mature socialism considered to be the basis of existence of the society and its every member, one of the basic values of socialism, a mediator between the society and the individual. Under the communist society, the work supposed to turn into a necessity and basic sphere of self-realisation of every human being. At the same time while according to Soviet ideology class differences and in broader sense social cleavages were diminished the importance of stratification (inequality) aspect in related researches increased. (Helemäe, 2000; Joons, Helemäe, Loogma, jt, 2000). Another question is to what extend the Soviet ideology was correlated with the "Soviet reality". It was argued by Helemäe, that while conceptual shifts in the treatment of work-related identity were in line with official discourses (importance of "subjectivity" and role of agencies step by step diminished, with no space for such kind of concepts like work identity).

The influence of the educational systemAs the soviet time society was an industrial society, the "technical progress" was seen as an important factor/driving force behind the socio-economical development. Political texts

brought up the progress as something indivisibly good but sociological researches told about a gap between the progress and the work motivation of the youth. In the 1970s and the 1980s, one contradiction can be found in the values in the educational field as not even the Soviet system was able to overcome the antagonism between the physical and mental work. The general education had a clearly "academic" orientation but available jobs for trained workers were of a "Fordist" type, which was far away from "self-expression". The massive secondary education did not result in a reduction of influence of social background on the education level of the young people and as there was practically no unemployment, vocational education in the 1980s was not as much a protective mechanism enabling the youth to find work as qualified workers as it was a social reproduction system. For instance, only one third of the specialists and managers had reached their position through university studies. ***Changes of work related values in the soviet time***In the beginning of the 1980s, clearly-defined social changes in the value perceptions of the youth began, lasting until at least the middle of 1990. These changes have been characterised as a process of self-centred of individualistic pragmatisation of the values awareness. The term individualistic marks the decline of altruistic orientation and an increasing preference of individualistic, self-centred values. ***Democratic organisations***The trade union and few exsisting professional organisations in the ESSR were mass organisations with recommended membership. In the soviet time, trade unions had a wide socio-political repertoire of functions and from the workers point of view, they had quit much in common with "consumption societies" as they distributed the vouchers to tourism and sanatoriums, put children in summer camps and even registered the car purchase permits and apartment allocations. Today, the trade unions are very week and even non-exsistent in sectors of "new economy". The professional organisations today can be profilised as "development centres", that very much want to become centres of processes like vocational standard construction and grass root democracy. This change of practice tells about a situation, in which democratic professional organisations have to work hard if they once want to become real organisations of workers / professionals. The organisation as such is well known, but more as it was to be found in the soviet time then today. ***"To be at work" or "Work at work"***In some interviews, employers tell about how people thought upon work in the soviet time, especially when they describe present problems as grounded on soviet time values. Old values and norms may lead to performances that todays' employers call "passive". Workers do not dare to solve problems independently, they think they get paid for "being at work" and not for "working", they are not interested in vocational carrier, they are not interested in "lifelong learning", they are bad at communication and surrounding people may very well be of the opinion that these persons have not found a vocation/occupation that suits them. Today, these kind of performances look like strategies of protection and as such, they helped workers to protect ones personal dignity also in the soviet

time. 2. **Conditions of transition - some socio- and macro-economical aspects**

The social transition, which took place in Estonia and other Central and Eastern European countries from the end of the 1980s was highly systemic and covered all aspects of social life without exception (EHDR, 1995-2000, Lauristin, 1997, and others). The transition has been highly uneven and ridded with enormous conflicts and contradictions. The political and economic successes better visible from outside have been countered by major internal structural conflicts. Birth rate and average life expectancy have declined, poverty and inequality have increased rapidly both in the economical and generation sense. Transition to market economy brought along essentially different labour relations, created unemployment as a new social phenomenon and forced people to change not only positions in the labour market but also their attitudes and ways of thinking. The demand for employees' flexibility and mobility has risen dramatically.The extremely rapid and liberal changes in the economic structure have frequently placed the "diverse" people (women, the disabled, the elderly) to the position of risk groups as far social protection and support have been minimum. It is estimated that approximately 25% from entire working population has been able adjust to rapid changes successfully (EHDR, 1998)The macro-economic shock, due to the transition to a market economy, has been accompanied by dramatic changes in the labour market. Main features of these changes are as follows.

*The relative share of agriculture and industry has decreased substantially whereas that of the services sector has undergone substantial growth. *The number of inactive people has steadily grown throughout the period following re-establishment of independence. Among the inactive people the number of learners and discouraged workers who have given up seeking a job has increased during the period. *The unemployment has steadily grownOne of the main unemployment –related problems concerns the domination of long-term unemployment reflects the people's inability to put to use their knowledge or skills or to adjust to the new environment. (Human Development Report, 1997). *Low flexibility and mobility level of employeesBesides the macro-economic shock the important factors are also the passive attitude of the people towards retraining, low mobility and psychological inability to adjust to the conditions of market economy. (Eamets 1999). Changes in the employment by sector

Sector	1994	1995	1996	1997	1998	Change (%) 1994–1998
All workforce						
All	433543	442725	431163	433608	427323	–1,4
Primary (%)	12,6	10,0	103,2	11,2	9,8	–23,4
Secondary (%)	45,0	43,5	40,6	39,6	40,7	–10,9
Tertiary (%)	42,4	46,5	49,0	49,2	49,5	+15,2

Source: National Development Plan, Eamets, 19999

Part-time work independently of the worker's own desire has been considered an indicator of hidden unemployment. (Human Development Report 1996). Later literature, especially staring from 1999 has been describing part-time work rather as a measure to reduce unemployment and an indicator of mobility. Yet the part-time work in Estonia is mainly a necessity/inevitability for many workers, caused by loss or reduction of work opportunities, rather than a matter of free choice. (Tööjõu uuring, 1998). Ca 8% from labour are employed on part-time basis. **Mobility of labour** usually means the individual's freedom to choose a more suitable post in another firm, sector of economy or at another location. Increasing this option presumed the creation of opportunities for adult training and changing residence. Interviews show that the economically inactive people in most Estonian counties have been relatively immobile and most of them have not changed their place of residence between 1989-1995. Approximately 12% of workers can be described as discouraged, because they are unwilling to move to another place and have given up competing in the labour market. (Eesti Inimarengu Aruanne 1997).**3. Theoretical considerations**

Theoretical treatment of the transition has emphasized the following circumstances (Lauristin and Vihalemm, 1997, 1998). 1) Transition refers to systematic changes in the whole society which brings about the change in the societal type. 2) The "transition" has been used as a social construction which either expresses the understanding of the process and the related certain objectives, purposes that exist in a certain normative societal model like developed post-industrial or welfare society or the society of the Western democratic market-economy) or political and economic status (market economy, democracy). The last one opposes the status which was the starting point of the transition (early-industrial, planned economy, totalitarian society). In the book "Return to the Western World" (Lauristin, Vihalemm, 1997) the authors have observed the changes in Estonia as a "civilisation shift" in the society, which could conditionally be termed as a process of "westernization". This transition can largely be interpreted as a return of the nations incorporated into the USSR from the East to the West. The "westernisation" process also means a change of the system of work-related values.It has been stressed (Offe, 1996, cite Lauristin and Vihalemm, 1998: 677-678) that transition is a multi-layer process consisting of sub-processes each proceeding on different level of society with different speed: shifts in identity, institutional changes and changes in the creation and re-distribution of the material resources of the society (winners and losers in the transition process). One of the relevant contradictions concerning the transition is the contradiction between the institutional changes on one hand and the subjects (agencies) on the other hand (table 1). On the institutional level, the soviet-type legal, administrative and management systems have been replaced by the new ones (market-economic, democratic). However, it is often the case, that these are not effective or do not "work" at

all since they ought to correspond to the new value system and the "civilization competence" . The latter means also overcoming the mental inheritance of the (soviet) past and adopt new values, new democratic individualist culture. Therefore, the existence of labour laws and institutions often may not mean the decline of the corresponding problems in the society since the cultural factors (primarily the values, attitudes and stereotypes of people) have a determining significance and the term for societal learning process is long. "The replacement of the mental world of the soviet time by the new comprehension, values and habits may not occur step-by-step along with the generational change in the transitional society; rather it should take place abruptly, painfully, through disappointments and inner conflicts"(Lauristin, Vihalemm, 1998:906)The two vital processes - democratisation and marketisation - have been put together by P. Sztompka as follows: Domains in post-socialist transition by Sztompka

	Institution-building	Culture-building
democratization	Parliament, political parties, free elections, ombudsmen	Political culture, civic culture, citizenship
marketisation	Private firms, banks, stock exchange	Entrepreneurial culture, work ethics & culture

Source: Lauristin, Vihalemm, 1997 cite Sztompka, 1996:118)

As reality is more complex then the theoretical entities, it is often hard for the researcher to decide which processes to analyse and which ones not. We have decided to concentrate on the development of institutionalisation, but we also realise, that other processes are of utmost importance. Analysed processes have been found in the fields of macro-economical development and the change in the social constructions that infect "work"(the way individuals think upon their work and how their work identity may be formed). **4. Démocratisation and marketisation processes in Estonia**

To show the usefulness of already mentioned transition theories, interviews made with representatives of employers (mainly general and personnel managers) and sector specialists in the IT- and health care sectors will be referred to and analysed as they illustrate many of the processes that occurred after the post-socialist turn in the middle of democratisation and marketsisation.***Democratic organisations*** Sector organisations and professional organisations exist in all studied vocational fields and they co-operate (are expected to co-operate) with the tripartite structures as creation of vocational standards and vocational school curricula are discussed and/or constructed.Sector and professional organisations spread information about a political and civic culture they wish to create. Meetings are organised, vocational newsletters are published and distributed. In some cases, even firms try to provide material they think is needed for the creation of new values like life-long-learning and well defined vocational identity that may help them keep

good workers and get along with the average worker as well. In the IT and medical sector, the values of life-long-learning seem to be a part of everyday life at work (that is the very case in IT sector). The firms in these sectors organise courses that the firms find important and sometimes, employees themselves share new knowledge in different forms (predominantly informal), some more spontaneous then others (book circles at hospitals, sauna evenings and information collecting, developing and spreading networks in the IT-sector).***Appearance of "private"***The studied sectors are differently related to the concept of "private". The IT sector is characterised by foundation on private capital. The medicine sector is by tradition state owned, but small private firms did appear in the transformation of the 1990s. Big hospitals are still parts of the state-budget. ***Being an entrepreneur-worker***All sectors' representatives talk about the new qualities they want their employees to develop. "Selling" attitudes and opened personalities, always ready to "communicate" are highly valued. Nurses are usually stable and some doctors even think upon them as just as stable as beds and chairs, pieces of furniture, at the hospital. When nurses (because of new laws that not allow nurses to work more than 100% at one hospital) work at more then one hospital, something might happen to their picture of themselves as nurses. In this case, they are mobile and free to sell their work to any hospital. IT workers are as a rule more mobile than they are stable and this sometimes lead to problem with work ethics. Good IT workers must move on and stay "online", learn and experience constantly. The question has been asked: Who owns the knowledge of the IT worker? How long must they work at one firm, that provides training and thereby invest in the occupation of one specific IT worker? ***Processes behind new services***The IT sector is highly dynamic and growing, new services emerge quickly in very diverse ways. The IT sector is very young in terms of sector itself as in terms of people working in the sector. There are almost no traditions and lack of regulations in the field. At the technicien level we are looking on the professions, connected mainly with client-support activities (system designers and builders for private and public clients, technical and consultative clients support providers). There is lack of professionals in the field In the "soviet time", the most powerful person at the hospital was the doctor. S/he told her/his nurses what to do without any moments of discussion or teamwork. The patient was often seen as nothing but a sickness or a body. Women still tell terrifying stories about how they delivered their children alone at the hospital with no-ones hand to hold and no-one to ask for information of help. Most of the women felt deserted and scared. Nurses of today tell about a reality, when the healing process discussion has let out of the circle of doctors and reached both nurses and patients. New sources of initiatives in the health care are the wishes of the patients and the possibilities that new technical equipment enables. ***Standard construction***As the interviewees were experts at a company level, institutional changes have been mentioned as a context or processes on sector and company level. The creation of occupational standards

and the improvement of curricula are mentioned as the most important institutional developments at this level. Behind the processes of institution-building, there are networks involved in both sectors. The "civic" activity – activity of associations and unions are somewhat different in the different sectors.In the IT sector, the association of entrepreneurs concentrates on educational questions, both on college, university and continuos education level. They work both as a lobby and as an organiser training courses and seminars at the sector level. Big IT companies belong to the association and the association itself says, that the organisation wants to have big companies as members, they do not need small companies and small companies do not need them. In the health care sector, there are different professional organisations and workers' unions for different vocational profiles. The nurses organisation has worked hard with the training programmes, with which they also got help from abroad as they co-operated with Danish colleagues. All nurses are united in the same organisations. There is no difference between nurses form state-hospitals or private hospitals. ***Informal networks***Behind the formal networks, there are also many informal professional activities (clubs and societies) in the IT sector. Technical personnel from different firms meet and discuss common problems and there is a never ending professional information exchange process going on. Associations in both sectors have in common, that they are involved in the process of developing their training systems and vocational curricula***School meets work - practice***The institution of practice connects the company and state level, as 'practice' is understood as an institution, where these two levels should co-operate. Sometimes associations bring them together. The contact between education systems and firms is often mentioned as very fruitful, as both companies and young skilled workers have much to gain. The firms have possibilities to get workers that they really need and the trainees get employed. In the IT-sector, the wide-spread practice is that firms employ good pupils "directly from the "school-desk" before they have graduated. The firm pays for the education and the pupils sign a contract, key to which is that he or she promises to work for the company for at least a certain period after graduation. Just graduated nurses seem to more keen of staying in the health care sector if they had the opportunity practice at a hospital which speciality they are interested in. Graduated nurses must start to specialise and work at a state hospital for a couple of years until they get their certification. With certifications, nurses may also work at private hospitals. In other words all nurses start their nursing carrier at state hospitals.

Standards and realityAt a national level, occupational standards have been worked out for both sectors, but very few of them have been adopted in practice. In the IT sector, the standards are understood as important in an educational context as the occupational reality consists of more categories than those covered by the occupational standards. In the health sector, employees seem to be satisfied with the new training programme. In the health sector, problems unknown for the IT-sector appear as there are lots of nurses working, who got their first

training in the "soviet time" or in the years of transition without clearly formed new programmes. Open minded nurses, willing to learn, integrate constantly with new work realities, attend weekend courses or even go back to the medical school to take part of the new training programme. To get rid of soviet time nursing style, nurses must attend courses constantly, if they don't, their employers have the right to fire them. More than companies trust diplomas and certificates, they trust practical skills and experience and they give new employees a trial before they decide whether to employ them or not. Most companies have been decentralised as decentralisation should help to keep the budget down. According to the interviewees, big companies in both sectors offer less interesting occupational profiles than the small ones. Small companies allow the skilled workers to take part in complete processes from the very beginning to the very end. ***Life-long learning***In the IT sector, parts of training are controlled by the companies only. The computer and program producing companies allow only technicians with the certificates to install or administrate their systems or renovate their computers. On the company level, there is needed just a few persons, who have certificates to solve certain operations and as the certifications are seen as expensive, the companies do not have more people certified than they need. Problems may appear, when employees, who have the certificates, leave the firm.In the health care sector, training is organised by different organisations. If a hospital buys new equipment, the selling firm trains the personnel. On hospital level, the head nurses or the nurses specialised at looking after the personnels' level of competence, may send nurses to courses to gain competence that the hospital need. ***Skill gaps*** Social and ethical norms are mostly formalised in big structures and created as part of an interactive process in smaller ones. Personnel managers in the IT sector strongly stress that their skilled workers are not good in communication. This skill gap or weakness of work culture leads to problems to a sharp border between the technical and financial personnel in the IT sector. The skill gaps in communication and team work skills is very obvious in the case of IT-technicians as well as they speak another language and have extremely individualistic attitudes according to the interviewees.The health care sector employees need further training connected both with technical aspects and human aspects (communication, co-operation) of the healing process. Lack of independence has been mentioned as one of the big skill gaps in the health sector. Not all doctors let the nurses work independently and not all nurses are used to be responsible individually for their work performance. ***Correct work motivations***Values, which enable the creation of work motivation, are different in the different sectors. According to the interviewees the IT-technicians should get their motivation both from good wages and from the excitement the field of activity (IT) itself may provide. Nurses should see their work neither as a vocation nor an occupation, but as a healing mission. Wages are low and thereby, we have been told, only nurses with a strong mission identity or women, who could not get other jobs, stay in

the health care sector. ***Heart of identities***Life-long learning is taken for granted in both sectors and it is understood that such learning is necessary to keep quality high, not just to make an individual career. The training motivation is regarded differently in the sectors. In the IT sector, the never ending training is seen to be a part of the technician's vocational profile and identity. In the case of the health care sector, it is stressed that even if the forms of nursing may change, deeper dimensions of nurse action in a healing process context will always be the same. Thereby is stability an important dimension of the nurse identity. **Final remarks** According to the data of the 1976 study the authors reach the conclusion that the orientation to work in the "is developed by vocation values rather than aspects connected with the work situation, which may be highly valued, but do not serve as a more general value basis for the rating of the work" (Töölisnoor...,123). In the case of IT sector employers can see the process of developing work-related identity just the opposite way: the work identity and related to them phenomena (like values) in the IT sector are developing mainly by values / culture connected with the work situations. The informal settings are of great importance in the process of developing occupational identity as well.

The individualisation trend, that first was recognised in the 1980s as a lack of altruistic orientation, has become one of the greatest forces behind both conscious and unconscious vocational and occupational identity formation. If individualisation is mentioned as a positive feature, independent work performance and ability to be personally responsible is referred to. On the other hand, when firms try to get rid of communication and co-operation problems, they try to make their employees act less individualistically (more collectively) and act first of all in the name of a work group, project group or firm.

Not far away from individualistic features are the features of motivation lack. Lowly motivated workers could for instance be cut out of work related discussion, or passive in co-operation situations, as may be the case with the individualists as well. This problem should be related to a reality, in which practical skills are less valued then theoretical and blue collar work is thought upon as routininized, low paid and dirty. This will for sure be one of the most hard problems to solve many sectors, where practical skills are needed. The IT-sector seem to have been spared from these problems, as the profile of work reality always have rather been flexible and mobile then stable and routinized.

The **marketisation** trend, that first was recognised as a change from state owned firms to private initiatives has now reached on one hand the discourse of occupational and vocational standards and on the other hand the social constructions behind the identity formation processes.

The **democratisation** process has in the 1990s in Estonia first of all meant construction of democratic institutions, construction of tasks for the

organisations and also the construction of models of co-operation for the partnership

The dynamic processes within this abstract system of concepts have been recognised in our studied situations. On one hand, trained workers seem to connect their identity with a specific occupation that provides them a living and thereby a social stability.
In some interviews, employers in the furniture industry say that for carpenters of yesterday ran from one firm to another because of a somewhat bigger wage (some hundred EEK) when todays' trained workers are more interested in stable wages then they are in short time projects with higher wages. On the other hand, one must not forget other employers and sector specialists, who seem to worry about the new generations. They say that the pupils at vocational training programs are more fond of the size of their wages then the possibilities of learning and/or developing while working and the existing schemes of vocational carriers. The democratic sector organisations are at the moment working with the vocational standards. There is a gap between the training programs and the working reality. Employers ask for dimensions of training such as ability to work independently and to solve smaller problems in the situations where they occur. Trained workers, on the other hand, ask for more practice as the programs can not teach what is really needed for an adequate work performance. Nurses must specialise as they change occupation within the medical system and trained workers in the forest and furniture industry specialise in the choice of firm. They can become either a "handicraft" carpenter or a "computer using" carpenter. As many young trained workers never end up at occupations they have been trained for, and many change occupation/vocation during the first years at work, both firms/employers and democratic vocational organisations ask for better organisations of the practice. During practice, one can get in contact with potential employers and also find the kind of vocational performance one like most. Interviewed also find the identity formation while practising as important. The pupil will understand if "this is something for her/him" while performing and also firms often decide whom to employ as their personal quality and fitness for the vocation appear better in work performance then in interviews.

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The Challenge of Modern Work Identities in Europe

THE CONSIDERATION OF RELEVANT FEATURES FOR THE PROCESSES OF IDENTITY FORMATION IN CURRENT VET POLICIES

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Abstract.

The paper shows how current VET policies in European states -and their particular reliance on work experience schemes- do contribute or rather hinder the chances to develop professional identities in vocational education students. The paper uses the project concepts and models in order to see how they work in policies being implemented, and the extent to which them narrowly focus on skill formation or also take into account -as voices raising from the productive system increasingly demand -other elements contributing to an integral vocational education which lay at the very core of identities -engagement, interaction, recognition by one and the others, a sense of belonging and a sense of community -and which are not only learned, but also taught in different ways.

This paper invites its audience to an exercise, particularly all the partners of the FAME[1] research project. This exercise will consist in trying to put together the macrolevel and the microlevel of vocational education and training policies, as well as of employment policies in the European Union. Its aim is to reflect and try and find out how those policies are affecting the microlevel of how young people -as well as other adult workers- are forming and negotiating their identities as workers.

In trying to combine both levels, that of wider policy guidelines with that of interpersonal relations and practices in everyday working contexts, my assumption goes back to some of the hypothesis of the research project, namely:

[1] Vocational identity, flexibility and mobility in the European labour market (contract nº HPSE-CT-1999-00042, acronym FAME, research project funded under the 5th Framework Programme of the EU).

a) Unstable development and formation of vocational identity is due to multiple social changes.
b) Vocational and occupational identity provide the basis for motivation and good work performance, commitment and quality; and
c) Education, specially vocational education and training, are an essential source for the development of work ethics and vocational identity.

If hypothesis a) is true, what is then the extent of hypothesis b) and c)? What are the contexts for the formation and negotiation of vocational identities? How do these work in a time of change?

The paper is divided into four different sections. The first one describes what are the sources I have considered for this discussion. Section two consists of what are the most relevant issues, in my view, for identity development and formation. Section three focuses on current labour market policies and vocational education and training policies in the European Union. Section four gives an end to the paper by making some concluding remarks as well as outlining questions arising from the paper for the further development of the research project.

1. The sources of information.

When looking at literature we have found much literature on flexibility and mobility in papers written by the European Commission, by relevant European institutions such as Cedefop, as well as in the academic literature. Yet, we do not find any clear nor straight reference to vocational identity in those policy issues. This is not strange, given that identities are something in the domain of the individual, apparently not policy oriented, it might be even seen as a threat that there were any sort of guidelines relating to what sort of identities might be fostered. And yet, these are present in

other policy domains –as is clear in the examples of national identities or linguistic ones-.

My question then is the following: what is the impact of the policies which are attempting precisely to increase mobility and to widen the scope of flexibility in the labour markets in Europe, on the processes of identity formation?

What is the impact they have upon vocational education and training policies in terms of curriculum content, curriculum delivery, the organization of training? Another question is that of what types of identities[2] are fostered or hindered by current policies.

However, despite looking at all these policy documents, I am well aware that the impact of policy upon practice is relative: practitioners at all levels of policy implementation, particularly vocational education teachers and trainers, can manage to handle with a good deal of autonomy, within the conditions and frameworks set by such policies.

The main documents on which I am relying are the following:

COM (2001) 313 final, issued 20 June 2001.

DGXXII, Globalisation of education and training, issued September 2000.

COM (2000), Employment policies year 2001

Communication from the Commision to the Council: New European labour markets.

COM (2000) Joint employment report 2000

CEDEFOP journal ,Vocational education, numbers 20 and 21, articles by Bainbridge, S. And Murray, J.

I have also taken into account policies related to work experience in some countries, taking into account work done in a previous research

[2] Dif, M. (2001). Forms and implications of work related identity transformation: Preliminary findings of "FAME" project investigation in the French case. Paper presented at ECER 2001, Lille.

work in which I took part[3], therefore relying upon documents on work experience schemes and policies in Danemark, England, Ireland, Sweeden, Hungary and Spain (Giménez and Toribio 2001).

2. Identity formation and development.

For going into these documents I will put some basic ideas on what are the main issues in the formation and development of workers' identity. These are related to the hypothesis in the project.

Identity formation is, in a very clear manner, an issue in VET students. But it is also an issue, at a time of change, in employees, among others through lifelong learning, as well as through changes in jobs, workplaces, companies ...

The processes of identity formation are processes of exploration and of commitment towards the identity one has found to be one's self (Bosma 2001). Developmental psychology is very clear about this, not only in relation to vocational identity, but also when talking about young people, adolescence, in their identities in general.

These may result in different achievements (Zacarés 1998): The difussion of identity, forecloser, moratorium and achievement. In the processes of exploration and commitment people don't define their identities. They look around for different identities and they start a process of exploration which, if negative, may result in being close, not to explore and to focus in a single one. On the side of commitment, people may postpone it or achieve one. The commitment is a consequence of the exploration process. They may be open or narrow, may be in a hurry or not.

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[3] F4 (TSER): Research Project SOE2-CT97-2025, WEX21C, Work Experience as an education and training strategy: new approaches for the 21st. century

What are those processes in VET and lifelong learning, in which young people do engage to explore and commit themselves or not? What are the chances they have – chances ‚allowed' by policies- to do so while in VET schools or in the workplace?

Identity is constructed and makes a meaning for one self (how I perceive myself) and for the others (how they perceive me). It is in the interplay between both that conflict arises, being conflict the very engine of the processes of exploration and commitment. As a result of conflict, three different processes take place: recognition (embedding both legibility – cognitive recognition, how others are able to read the identity I am trying to portray and propose to them- as well as valuing –moral recognition: not only what the others do recognize, but what the othes see into it, whether they have it into esteem or not, and in what esteem, they think it is right or not -); negotiation (which always consists of a relational transaction: to approach and to agree those views of mine and others); and redefinition (a cognitive transaction which is portrayed as the new identity and which is therefore ready to be a new source of conflict). Dubar has explained all of these, and they are at the background of the identity types the project is working with (Dif 2001).

Who are the relevant others in the contexts of VET and lifelong learning, in work experience schemes as well, with whom young people engage in order to be ‚read', ‚valued', ‚recognized', and with whom young people have to ‚negotiate'? Which are the contexts and conditions of VET and lifelong learning in which those processes take place?

Behind identity there is also an issue of legitimacy, but also one of status in different senses -law, money, prestige-. Conflict has to be contextualized, and two dimensions have to be taken into account: space (the groups to which I belong) and time (biographies, succession of transitions, trajectories of myself and the others with whom I find myself engaged).

Identities along history have been produced, in the recent past, as the result of the impact of institutions. Today, identities are often understood as a matter of choice, as the result of one's affinities, afiliations and rejections to wider groups. Yet, not all identities are accessible to all; identity is not simply a matter of choice. Discourses on bricolage (Carruthers and Uzzi 2000, FAME consortium 2001) are therefore dangerous, for they depolitize something which is strongly ideologically based and biased. Otherwise we neglect the role of others, and we miss here one of the crucial issues of identities. And this is another source of conflict for identity.

With that in mind, we might think whether there are social norms in professions nowadays, what are the patterns of professions nowadays, where are the contexts in which people are assimilated or rejected from a professional perspective, where professional identities are recognized both from the legibility and the moral value of them; what is the contribution of vocational education and training to the development of identities, to the sources of conflict of people, to presenting conflict to young people, to help them cope with those problems and solve them.

Despite this is pretty akward, we may find some key aspects to these questions in the work done by Paul Willis (1988) in the late seventies in England; or in the work done by Lois Weis (1990) at the beginning of the nineties in the United States.

3. Labour and VET policies in the European Union.

Let's move now to what are the current VET policies and labour market policies in Europe. I basically agree with the idea that the discourse of change and acceleration is basically a discourse, but yet it has an impact upon VET policies, which are embedded into such a form of accelerated changes because there are too many reforms too often. This, of course, is having an effect.

What are the drivers for labour market and VET policies in Europe? We must look at them in the summit of Luxembourg, Lisbon, Feira and Stockolm. The foundations set by European politics are four: employability -which is linked to lifelonglearning-, entrepreneurship, adaptability –which is fostered by the role of social partners- and equality of opportunity. And these are all set in art. 128 of the Treaty, which is linked to the art. 126 on labour market policies, which is also to be compatible with economic policy. It is funny that this relation is not established the other way round: that economic policies are to be compatible with labour market and social policies. It is clear what the target is here, and it is even clearer if we look at the drivers for labour markets: globalisation, technical, social and demographic change, the process of European integration and the shift to services. As for economic policies, the main drivers are competitiveness and cohesion. The strong European social system is based upon human resources, and its social welfare and social democratic tradition. This has been a strenght against possible competitors, is it still so?

And from this we go to a competitive knowledge economy which is based upon flexibility with security as well, understood and complemented through increased adaptability to changes in the workplace.

And for all of these, the key workd nowadays is that of increasing mobility (Richards 2001, Skar 2001) (students and teachers in all forms of education, from VET to HE), internationalising curricula, allow people to move from one country to another, recognition and transparency of qualifications. So here we can see a clear move towards homogeneity in what they attempt and it is funny that this is valid for both VET and HE. The difference between both of them could be found in the question of the differences between occupational and vocational identities. Identities in the professional tradition of HE are stable, while VET has no tradition, they are new, no institutions stablished.

How to work on all of these? All the European papers on employment policies and training policies focus on here: the key word to develop the workforce is to remember one of the agreements of the summit of Stockolm, the creation of a new Task Force on Skills and Mobility, putting both together.

It is also said that we have to redefine education to keep people with skills, turning education into training, losing the value of education as a different word to that of training.

If we look at what happens with work experience policies (not with apprenticeship policies), school based work experience, this is a very good context to study how all these processes happen: conflict, who is in the conflict, not only on the shopfloor, with workers, organizations, identities of teachers (probably highly institutional). In the beginning of one's professional career, at the core of the exploration and commitment, processes of identity formation; you can have them all in work experience schemes.

Yet it is funny to see that there are no straightforward policies on work experience, to some extent it is left to itself, individually constructed. Despite the expansion of work experience in most VET offers, despite its presence in all education levels. There is hardly any difference in policy documents on work experience. There is usually no relation of qualification level to the length of work experience, neither to different uses of mentorship or planning. There is a lack of policies regarding work experience: commong guidelines with disregard to different levels and requirements: aims (adaptation, personal development, transfer, reflection and further development, ...), phases are rarely conceived (Marhuenda 2001), the axis are several and rarely compatible (adjustment to the workplace, developing skills, reflection upon work profile, giving a context to the jov, giving a context to the career development, even giving a context to the world of work –this last one seldom expressed-), arrangements are

similar at all levels of qualification. Most of those aims are nevertheless not achieved and, in most cases, not even evaluated to see to what extent they have been present.

What are then the trends and issues in European VET guidelines and policies? In relation to other policies, we find traces of de-regulation, of expansion –of lifelong learning understood as professional qualification or requalification, rather than anything else-, relegation of initial VET which is being substituted by higher education. We appreciate also a growing interest in comparability which may risk the very notion of subsidiarity, through mechanisms of social governmentality, helped by the speed and pace of reforms which is being accelerated and avoiding proper evaluation. And there is also recurrence to stereotypes: work experience in different versions, the maintenance of the myth of dual system. There are no policies addressing as a core element transitions of young people, rather there is a marketisation of the world of training, where movement rather than performance is what counts. What is the role of trade unions in the midst of it? What are they doing and what are they called to do?

4. Concluding remarks.

If we find there are different identity types (Dif 2001), what do they offer from an educational point of view, how do different types relate to each other? And yet, in order to look in depth at the processes of negotiation and recognition, we don't only have to take into account organizations, but also individuals within the organizations who carry their own identities. Work experience, and the actors involved in it, offers us a quasi-laboratory environment in which to look at them: different actors with different perspective, with a strong emphasis in teaching and learning, with an axis on socialisation of young workers, with worries on labour market dynamics, ... They as individuals have different vocational identities which

are of different types, they are negotiating and redefining their identities within their organization and in relation to their colleagues.

What could we consider on how to bring together the micro and macro level? What are the questions? Some of these might be the impact of divisions of work and the content of work and vocational education to identity formation processes. It makes a hughe different talking about skill is very different to talking about work -the content of VET-, how are we dealing with them?

How do we think of other terms which are nowadays common in the literature like communities of practice, in relation to the conflict in which people do find themselves and do interact to develop their own identities by affiliation or rejection of other people's identity in work and organizational contexts?

How can we manage to help identity formation processes with learning activities when we are also using VET schemes as selection mechanisms? How do they act hindering or fostering identities and in what senses?

Could we think of work as a cross-curricular axis for vocational education, and work -not skills- (utility, qualification level, meaning, dignity, time, justice, autonomy, ...); so is there a need here for personal references, for models[4], for adults, for workers, for biographies which help young people to develop their working identities? Is there anything to say here about the working class history of struggle of the past century? Could

[4] What are the features which enable recognition is only a first step. And what do young people value in them –positively and negatively-? The role of models here, which attract people for their positive impact, have played a role in the workers' movement during the XX century, and today with changing organizations, with mobility, those models are taken away. And yet, VET policies, particularly in work experience, where workers, mentors, tutors, might play the role of a model for the young person to relate to. There is nothing referred to that, mentors are dessignated as such by many different reasons, but not for the educational proposal that they may distinctevely offer as related to other workers in the same organization.

we benefit from this for VET nowadays, when mobility and flexiblity are dismantling so many of the achievements of trade unions at the end of the XIX century and all throughout the XX century?[5]

What are the relevant others with whom people are thinking of in relation to might get involved in order to negotiate and redefine their identities?

What are the processes of negotiation, recognition and definition and redefiniton which take part in work experience schemes and in VET courses and schools?

Do social norms exist in professions nowadays which may be at the core of these processes of identity formation? What is the role of the institutions in the formation of identities?

Where are the contexts in which people are assimilated or rejected? How do people come to these contexts, and what are the dynamics involved in them? Because such contexts are not fixed ones and they are constantly reshaped, how is that happening?

What are the differences among sectors ? What are the variations within each sector? How do these variations affect vocational education and work experience practice?

How do different types relate to each other when they meet on-the-job? There are the types of the organisations, the types of the individuals, the types of the other actors involved in work –and in work experience indeed: mentors, VET teachers, other students in their placements, colleagues of different ages, backgrounds, ...-.

[5] An issue there is that at the end of the 19th century the workers movement worked towards internationalisation. Fine, it did not work but it was an earlier form of globalisation on the side of employees, not of employers. For a long time, at least in the 1st half of the XX century, most workers and trade union members had an identity, not only a vocational or occupational identity, but a labour identity, an identity of the worker, a class identity, which has a different meaning. That is not being fostered by any policy nowadays –not even trade unions-, on the contrary, everything is being split and spread, so that those common collective identities do not happen.

There is a need for joint work of several European institutions: Dublin Foundation on living and working conditions, Turin Foundation on Education and Training, CEDEFOP, DGXXII and DGXII, European Social Fund, ... There is work to do together with that of other institutions, like the International Labour Office, or the European Federation of Unions.

And to end with a final question, what are the different identities and contexts in which young people develop their owns, what are the identification sources that people have nowadays, is work the most relevant source of identity or is it not? Production or consumption?

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THE HIDDEN LABOUR MARKET OF THE ACADEMIC

Background

Numerous studies have presented academic employment as a challenging subject in various ways. Nowadays work and society are changing rapidly as a consequence of technological developments and globalisation - amongst other things. Accordingly, the range of qualifications for jobs and the expectations employers have of employees become more demanding. The proportion of academic ally trained job seekers increases. This expansion of higher education further tightens the situation in the market.

On the level of the individual academic these changes and challenges mark a number of things. First of all, during the long academic training it is difficult for the student to predict what kind of knowledge and skills s/he will need in future work. After graduation, an academic degree does not necessarily guarantee steady employment. Nowadays, getting into a career typically means starting out in atypical employment: temporary employment or part time work – or starting out in jobs for which the academic are overeducated. And even if the academic gets a steady employment, it does not guarantee a "good old" linear career development. Academic career is turning into an ever more diverse creature. Workplaces, organisations, employers and tasks may change several times as a career progresses – further mixed with periods of training, unemployment or various pension arrangements.

Some of these challenges are highlighted during the period where graduates move from education to worklife. Here the standard of higher education, the individual characteristics of the job seeker and

the demands of the employer meet. These three factors have been studied so that in some studies the focus has been on higher education, some on worklife, others on the labour market (see Brennan, Kogan & Teichler 1996).

In this presentation I will discuss the concepts of hidden labour market and open labour market and how they differ from each other. After that I will look into what it takes to find a job in the hidden labour market, and what benefits the hidden labour market offers for the employer and the job seeker. The empirical results of this presentation are based on *The hidden labour market of the academic* project, and I will start by giving a brief overview of the project.

Overview of the project setting

The main purpose of this project was to get an understanding of the so-called hidden labour market. The purp ose was also to explore the nature of the recruitment channels in the hidden labour market and to find out the knowledge and skills that the academic needs in order to get a job. These themes were examined through two time perspectives, 1) the present and 2) the future (2005-2010).

The delphi method, which is commonly used in future studies, was used for collecting data in this project. Essential to the use of the delphi method is collection of information from experts. Usually information is collected in two or three rounds. As the collection of information proceeds from one round to another, better quality and in- depth information is received. In this study, information was collected in two rounds: 1) a questionnaire, and 2) a virtual discussion forum via the Internet. 84 experts returned the questionnaire and 14 experts took part in the virtual discussion forum (round 2).

For the study we selected informants (experts) from as many fields as possible. There were researchers, decision-makers, politicians, union members, people from the field of education (i.e. head master, personnel trainer, course designer) and people from the field of working life (i.e. consultant and member of recruit unit, employers). The public, private and third sectors were all repre sented in this study.

The open labour market vs. the hidden labour market

The hidden labour market is a widely used concept among consulting business. Some of the Finnish and American consult enterprises estimate that even 70 -80 % of applicants get a job from the hidden labour market. (Employment Resource Centre 1999; JobStar 1999a; Solanne 1999.) Because of this estimation it was important to examine the hidden labour market of the academic.

Generally, the hidden labour market has the same function as the open labour market because the hidden labour market also allocates workforce. The hidden labour market differs from the open one in the case of job vacancies and in the channel of job seeking. In the open labour market job vacancies are advertised, for example, in employment agencies and newspapers, and through these formal channels applicants get information about specific employment opportunities which are open. In the hidden labour market, job vacancies are unpublished and applicants have to find job opportunities through informal channels. Informal methods include, for example different contact networks (for example relatives and friends) and self-initiated application in job hunting.

The experts who have taken part in the project estimate that the hidden labour market consists of unpublicised job vacancies, work which waits to be done because of lack of time or lack of other resources, atypical forms of work, and new innovative work opportunities discovered in preparation for future demand.

The most essential feature of the hidden labour market is the unpublished job vacancies. This means that although organisations do not actively try to recruit new workers, they still might have open work opportunities. Employers can use their social networks as a recruitment channel instead of published advertisements if they want to recruit workers to these work tasks. Employers can also offer new tasks to someone who already works for the company and in that case the employers do not have to advertise the job vacancies. In addition to these the employer can also employ a self-initiated applicant who happens to be in the right place at the right time.

Lack of resources such as time and money may produce work opportunities to the hidden labour market. Half of the experts estimated that nowadays in the organisations there are plenty of tasks which are undone because of lack of time of the permanent staff. Sharing existent work tasks (for example two workers working as part time co -workers) also creates work opportunities and so do new projects – be they projects within one organisation or joint projects of two or more organisations or sectors.

Experts consider that there is work that waits to be done among research tasks, development tasks, marketing tasks, informing tasks, management tasks and human resource development tasks. It seems that there are good work opportunities for the academic because these tasks have traditionally been suitable for the academic. And if an active applicant takes contact with an employer s/he might get a job if s/he has appropriate knowledge or skills for the tasks in question. There are also hidden work opportunities which even the employer has not yet discovered. New innovations and new market areas may bring with them for example new research and development and marketing work in preparation for future demand.

Experts believe that lack of money commonly inhibits recruitment. Nowadays there would seem to be a lot of work that is left undone because of lack of funding. As a way of solving this problem organisations tend to look for outside funding from various sources, this being the case especially with projects.

Recruitment in the hidden labour market

According to experts the following factors contribute to recruitment from the hidden labour market: 1) activity of the applicant, 2) qualifications of the applicant, 3) the applicant's ability to market his/her qualifications, 4) personal contacts of the applicant 5) work experience of the applicant, 6) applicant's ability to utilise atypical employment and 7) funding raised by the applicant or the applicant's information of possible source for funding.

In order to be recruited in the hidden labour market the applicant has to be an active job seeker and an active salesman of his/her own qualifications. Although activity is central to all job seeking, it is more than ever emphasised in the hidden labour market as the applicant has to consciously utilise his personal co ntacts as a job seeking channel.

Experts think that work experience is another important recruitment criterion both in the open labour market and in the hidden one. Practical training was considered by experts to be a good means of acquiring work experie nce already during student years. In addition to this, practical training creates important contacts for future job seeking and so do the atypical employments. The most common forms of atypical employment in Finland are temporary and part-time work (Nätti 1997). The experts also emphasise that when employers recruit employees from the hidden labour market they are likely to offer them atypical employment, especially project employment. Atypical forms of work make it possible for the employer to test the qua lifications of the employees, and at the same time the employees can market their knowledge and skills to the employer.

Lastly, as the experts thought that lack of money is a major recruitment obstacle, they made a radical suggestion of leaving the burden of funding responsibilities to the applicant. Applicants could bring their pay money with them, or at least have a serious game plan for finding financial support.

The concept of hidden labour market is not universally used in research. Earlier studies in finding jobs through personal contacts and self-initiated applications have used the term informal recruitment as distinguished from formal recruitment. Formal recruiting channels consist of for example public and private employment agencies, college placement bureaus and advertisements through different journals and media. The defining characteristic of formal recruitment is an impersonal intermediary between the firm and the prospective employee. In turn informal recruiting channels consist of different referrals such as employee referrals and referrals by friends or relatives and self -initiated applications such as walk-ins or write- ins. (Granovetter 1974, 11; Kirnan, Farley & Geisinger 1989; Marsden & Campbell 1990; Mencken & Winfield 1998.)

Why the employer should use informal recruitment channels

A number of studies have given different reasons why the employer and also the applicant might want to use informal recruitment instead of formal recruitment. Formal recruiting brings a large pool of applicants and that is a primary advantage to the employer. A large pool of applicants is advantageous because it is more likely to contain good candidates. The disadvantages of formal recruiting are financial cost and also the cost of the time it takes to recruit. (Bian & Ang 1997; Mencken & Winfield 1998.) Informal recruiting instead saves the cost and time of the employer.

The primary advantage in informal recruiting for employers is the quality of applicants. (Mencken & Winfield 1998; Kirnan, Farley & Geisinger 1989; see also Bian & Ang 1997.)

The higher quality of employees hired through informal sources can be explained by two theories 1) the prescreening hypothesis and 2) the realistic job information hypothe sis. The prescreening hypothesis means that applicants referred by current employees are prescreened by these employees. Current employees have the benefit of knowing both the job and the individual. With this information they are in a good position to ma tch jobs and applicants. That is why they are able to refer those applicants who are well qualified for the job. Additionally, current employees often feel that they have to refer qualified applicants because their reputation is at stake with that referra l process. In some firms the employee who makes the recommendation receives a cash bonus. Generally speaking personal recommendations from trusted individuals is the best measure of applicant quality. (Bian & Ang 1997; Kirnan, Farley & Geisinger 1989; Mencken & Winfield 1998; see also Loudin & Lear -Olimpi 1998)

The realistic job information hypothesis means that applicants who are provided with realistic information regarding a job are more likely to get along on the job because their expectations are more likely to be met. Realistic information consists both of positive and negative information. Applicants who are hired through referrals from a current employee are more likely to hear honest feedback about the work and the organisation. They have better insight about the work tasks and the organisation than those who are hired through formal channels. Also the self-initiated applicants are high quality workforce because they take time to investigate the job on their own. Thus these self-initiated individuals are relatively highly motivated with a greater degree of job knowledge than applicants recruited via formal channels. (Kirnan, Farley & Geisinger 1989.)

How the applicants benefit from informal recruitment channels

Realistic information about work is as much of an advantage to the applicant as it is to the employer. Based on negative and positive information applicants can estimate their willingness to take the job in question. Job-seekers can for example weigh in their mind their expectations and qualifications in relation to work tasks and work place. And if the applicant, after careful consideration, is willing to commit to work, s/he is likely to perform well. In addition, Granovetter (1974, 13) argues that those who have used personal contacts as a recruitment channel are most likely to say that they are very satisfied with their current job.

The primary advantage for applicants to use informal recruitment channels is that the ratio of supply and demand favours them. In other words, as the number of job seekers is lower, there is much less competition, and applicants have a better chance to get hired. In addition to finding jobs more effectively applicants in the hidden labour market are likely to get hired with less qualifications than in the open labour market. (Lindeboom, Van Ours & Renes 1994; see also Solanne 1999; JobStar 1999b.)

Finally

The hidden labour market is not a brand new phenomenon. Informal channels have always been used in job seeking. A current trend in consulting is to consciously utilise personal relations. Applicants are advised to keep in touch with their personal network in preparation for possible future need, and when the need arises, to mobilise job seeking on all fronts by systematically going through all the pe ople who could somehow help with the recruitment. Even though such consulting advice reminds of bloody competition, the hidden labour market is not necessarily all about competition. Via the hidden market it is possible to allocate the right worker to the right place. This is beneficial both to the employee, who can get the work s/he is looking for, and to the employer, who can find a motivated worker. The whole recruitment process can become cost beneficial both in the short and in the long run.

As higher education is a major investment for both the individual and society, it is important for the educational system to be able to respond to labour market needs so that graduates are well equipped to use informal channels in order to find appropriate work.

At the moment in Finland there are some work opportunities for the academic in the hidden labour market. And according to experts the role of the hidden labour market will increase in the future. They also emphasise that the hidden labour market is the market for the academic with active personality and multiple skills already now and also in the future. In addition they predict that the role of applicant activity will further increase in the future. This is challenging news to the graduates and high er education system.

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Vocational Education and Training Network (VETNET)

Developing a model of factors influencing work-related learning: Findings from two research projects

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Abstract

This paper presents a model of factors influencing work-related learning – that is learning in and at work. The model synthesises findings from two research studies, one British and the other European, both previously reported at ECER conferences. The European project investigated the role of HRD practitioners in learning-oriented organisations. This paper develops one aspect of that project – factors inhibiting and enhancing learning in and at work. The UK project focused on computer based learning, and this paper further examines learners' perceptions of the quality of com puter based learning materials. Drawing upon the two research studies, the paper identifies the various factors influencing learning in and at work, at organisational, functional (HRD) and individual levels, and then focuses upon three levels of factors influencing computer based learning. It is argued that identifying these, often contradictory and subjective, factors is an important step enabling managers and HRD practitioners to recognise how learning might be hindered or helped within the organisational, and particularly ICT, context.

Developing a model of factors influencing work-related learning: Findings from two research projects

Sally Sambrook

Introduction

This paper has three aims. First, to briefly review the concepts of lifelong learning, work -related learning and electronic learning. Second, to further explore findings from two research projects – one British, the other European – both previously reported at ECER conferences (Sambrook & Stewart 1999, Sambrook 2000). And, third, to present a model of factors influencing work -related learning. The model synthesises findings from two research studies that investigated work- related learning from two different perspectives.

The European project investigated the role of HRD practitioners in learning- oriented organisations, and particularly how they supported opportunities for lifelong learning. Findings from this project suggest a continuing shift from t raining to learning, where the role of HRD practitioners is changing, where managers are increasingly responsible for developing their employees, and where employees themselves have more responsibility for their own development (Tjepkema et al 2001). This paper further develops one aspect of that project – factors inhibiting and enhancing learning in learning-oriented organisations. However, a review of recent literature suggests learning in the work context can be conceptualised in, at least, two ways: learning that occurs *at* the place of work, and learning that is embedded *in* work processes. Thus, the term work -related learning encompasses all forms of learning in the work context. An emerging element of work-related learning is the use of information and communication technologies (ICTs) in the form of computer based learning.

The UK project focused on computer based learning in the context of small and medium sized organisations (SMEs), and this paper further examines learners' perceptions of facto rs influencing their experiences of this newer form of work -related learning. Drawing upon the two research studies, the paper identifies the various factors influencing learning in and at work, at organisational, functional (HRD) and individual levels, a nd then focuses upon three levels of factors influencing computer based learning. It is argued that identifying these, often contradictory and subjective, factors is an important step enabling managers and HRD practitioners to recognise how work related learning might be hindered or helped within the organisational, and particularly ICT, context.

Before presenting the findings from these two projects, it is useful to briefly review the concepts of lifelong, work-related and electronic learning.

Learning – lifelong, work-related and electronic

'Learning' – whether lifelong, work-based, or computer-based - is attracting much attention. Exploring learning in its broadest sense, whether within or without work, the 'Declaration on Learning' (Learning Declaration Group 1998, 2000) attempts to raise awareness of the various purposes, processes and problems associated with this complex phenomenon. At the European level, we have witnessed the official 'year of lifelong learning,' (OECD 1996, Gass 1996) and more recently, the publication of a 'memorandum of lifelong learning' (EU 2001). 'Lifelong learning' is defined by Brandsma (1997:10) as a continuous process of personal development for everyone, whether in work or not, encompassing formal and informal activ ities, and making demands upon the social structures in which learning takes place. However, the OECD (1996:15) suggests lifelong learning has broader objectives, including strengthening democratic values, cultivating community life, maintaining social cohesion, and promoting innovation, productivity and economic growth, and these are re-iterated in the latest EU Memorandum. At a national level, the UK government has encouraged lifelong learning (DfEE 1998), for similar reasons as cited above, and has, for example, created Individual Learning Accounts and re-structured the provision of post-compulsory training, education and learning opportunities under the Learning and Skills Council (DfEE 2001). Similarly, the focus of educational policy in other European countries, such as Finland, is to prepare young people for more learning -

intensive work and promote more efficient workplace learning (Lasonen 1999). However, such conceptions of lifelong learning tend to focus on formal opportunities and associated st ructural provision of resources. Yet, 'implicit learning' (Chao 1997), 'incidental learning' (Marsick & Watkins 1997) and 'informal/accidental learning' (Mumford 1997) can be significant processes within the work context. Work organisations are important partners in providing not only formal opportunities for training but also more informal opportunities for lifelong learning.

At the organisational level, there is an increasing emphasis on individual and collective learning to enhance competitive advantage (Moingeon & Edmondson 1996), to achieve innovation, productivity and growth. This can involve constructing 'learning environments,' which offer new opportunities for learning, focus on real-life problems, use feedback, encourage employees, and share learning (Lasonen 1999). However, this tends to occur in large organisations, which are able to provide opportunities for learning through significant work-redesign and team-working, for example, supported by sophisticated internal HRD infrastructures and knowledge management processes. The European Commission recognises that many (rural and peripheral) areas rely on SMEs for employment and learning opportunities (EC 1998). This increasing pressure to enhance learning to achieve competitive advantage is particularly problematic in small organisations. Although SMEs could be described as 'ideal' learning organisations, learning in small organisations tends to focus on external, formal training provision, given the lack of internal HRD infrastructure (Hill & S tewart 2000, Hyland & Matlay 1997). There may also be limited opportunities to swap jobs or work on other projects, activities associated with informal learning.

At all levels, there are pressures to find new ways of providing learning opportunities within the work context. It is interesting to note the subtle differences between conceptions of learning *at* work and learning *in* work (Sambrook & Betts 2001). At the Second UFHRD Conference on Human Resource Development Research and Practice across Europe, the sub- title was 'perspectives on learning at the workplace,' (http://www.ufhrd.com). Several papers focused on (more formal) learning activities conducted at the place of work (rather than off -site). Others explored how (more informal) learning could be integrated with the actual process of working, thus helping to remove the barrier of workplace learning being viewed as solely 'going on courses' and helping to recognise the value of 'finding things out on-the-job.' With the emergence of information and communication technologies (ICTs) providing new opportunities for learning (and working), the ICT context provides another research area in which to investigate work- related learning, that is learning in and at work. As with other forms of learning, electronic learning can occur simply *at* work or become actually embedded *in* work processes. For example, employees might be 'sent' to an open learning centre to complete an electronic course on health and safety, or they might sit at their own desk- top terminals and be involved in computer mediated conversations about some problematic aspect of their work.

The emergence of information and communication technologies (ICTs) provides new opportunities for learning and training. Indeed, there appears to have been a shift to e-learning, rather than e-training (Honey 2000). Currently, the bulk of computer based learning focuses on IT training (Training Zone 2000a). However, the increasing use of e-learning has widespread effects. For example, it appears that e-learning is used in larger organisations to provide individualised training, although a recent survey suggested that whilst 43% of employers stated they provided tailored learning, only 7% of employees stated they received tailored training (Honey 2000). This highlights how perceptions of learning vary. However, 90% of users claimed e-learning was useful, and 81% of providers and 66% of employers agreed it would bring huge advances in their organisation's capacity to learn (Honey 2000). In addition, e-learning transforms the trainer's role, a factor both feared and embraced by HRD professionals (Training Zone 2000a). The growing supply of computer based learning materials might provide accessible, flexible and affordable solutions, addressing organisational, functional and individual factors that appear to inhibit learning. Thus, it is important for managers, HRD practitioners and learners to be able to judge the

quality of ICT based learning resources to assure effective learning. Yet, this is often a difficult task (Carr 1999) and a potential barrier to the use of computer based learning. However, the main barrier to e-learning seems to be cost, and such an investment requires significant senior management support (Training Zone 2000a), but the results of another survey suggest that is isn't clear whether e-learning is more cost-effective than other forms of learning (Training Zone 2000b). Following this brief review of lifelong, work-related and electronic learning, the next section focuses on the two research projects.

The research question

Having briefly introduced the two distinct research projects, with broad and varied aims, it is possible to synthesis these and identify one common theme. This provides the specific research question for this paper: 'What are the factors influencing work-related learning?' The European project provides some answers to this question, examining (i) sociological aspects such as the organisation of work and changing functional (HRD and managerial) roles, and (ii) psychological issues concerned with motivation to learn, fear and confidence. The British project provides some answers to the question in the specific context of computer based learning. In exploring learning in the ICT context, the project focused more on pedagogical issues related to the quality of computer based learning, investigating such concepts as instructional design, a ccessibility, learner- centredness and transfer of learning, but also captured psychological aspects such as motivation and confidence to learn.

Factors influencing learning - in learning- oriented organisations

The European Union-funded research has been reported elsewhere (Sambrook & Stewart 2000), thus only a short overview will be provided here. This two-year project (1998-1999) investigated: reasons for seeking to become learning oriented organisations; how practitioners envisioned the role of HRD in stimulating and supporting employee learning; the nature of HRD strategies to enact this vision; and how practitioners cope with the factors inhibiting and facilitating the realisation of these strategies.

Research design

The research was conducted in two stages. The first stage employed qualitative methods to explore these questions in 28 case studies, with four organisations chosen from each of the seven European participating countries. During this stage, researchers analysed internal documents and con ducted semi-structured interviews with senior managers, managers, HRD professionals, and other employees (learners). The second stage, 'testing' the findings from the case studies, involved a questionnaire survey of 165 organisations across Europe, targeted at senior HRD professionals.

Analysis

Researchers explored learning within the organisational context, and identified key factors at three levels: organisational, functional and personal. These included the organisation of work, the culture of the organisation, resources available for HRD activities, and the skills, attitudes and motivations of managers and learners. It is on this last point – at the personal level - that there are further similarities between the two projects. The UK project identified factors such as learners' IT skills, confidence, fear and motivation as important issues influencing computer based learning specifically. These factors were also evident when interviewing learners across 28 European organisations about learning in and at work generally. The key factors identified in all twenty- eight case studies can be categorised into four main themes: motivation, HRD, culture and pragmatics. Each of these themes had factors which both inhibited and enhanced learning. These factors are summarised in Figure 1 below:

Inhibiting	*Enhancing*

Lack of motivation Extra work, unclear role Lack of self-confidence	**(1) Motivation** *Managers &* *Employees*	Motivation, enthusiasm, involvement Clarity and understanding of own role Increased responsibility
Role ambiguity Perceived as support function	**(2) HRD**	Role clarity Perceived as strategic partner
Insufficient learning culture Difficult to change existing situation	**(3) Culture**	Develop learning culture Senior manager support
Lack of time Lack of resources	**(4) Pragmatics**	Organisation re-structure, job redesign Investment in HRD & learning environment

Figure 1: Factors influencing learning in learning oriented organisations (Sambrook & Stewart 2000)

1. Motivation

The first category of inhibiting factors was the lack of motivation for learning. A distinction can be made between a lack of motivation on the part of *managers* for supporting employee learning, and a lack of motivation for learning or sense of responsibility for their own development from *employees*. This lack of motivation can be partly explained by various organisational, functional and personal factors, such as:

- the lack of time (due to the organisation of work and work pressures)
- the lack of reward for learning (at the organisational and HR functional level)
- the lack of enthusiasm in the concept of the learning organisation or training and development in general, and
- the lack of confidence to learn and/or take responsibility for learning (at a personal level).

The limited involvement of managers and employees in learning issues was linked to their lack of motivation for learning. Lack o f self-confidence was also a factor. Findings from the case studies suggest that motivation on the part of managers was balanced. Around a half of the comments suggested managers were supportive of and actively involved in learning. The other half sugge sted negative attitudes towards learning, perhaps caused by the perceived extra work involved and unclear roles. At the employee level, comments were more negative, with the lack of employee motivation as an inhibiting factor mentioned four times as often as the supportive factors, such as the active participation of employees in their own development and their enthusiasm to learn.

2. HRD

The second category of inhibiting factors concerns HRD, at organisational, functional and personal levels. A key factor was the clarity (or lack of clarity) concerning both the new/changing role of HRD professionals, and new approaches to learning and working. One reason is the limited understanding of HRD's role. In some organisations, participants talked about the lack of understanding regarding HRD goals, tasks, responsibilities and objectives, and even the distance between managers and the HRD function. Another reason is the lack of practical information regarding the need for learning, on learning processes and on learning opportunities. These two factors might contribute to the lack of motivation of both managers and employees, described earlier, if they are unsure of what is expected of them and what support HRD professionals will provide. However, HRD role clarity was also mentioned as a supporting factor. Other factors were clear communication, clear training systems, procedures or policy and a widely shared understanding of the importance of learning and personal development.

3. Learning culture

The third category relates to culture, an organisational factor that influences the activities of (and attitudes towards) the HRD function and individual attitudes to learning. In many cases, the lack of a learning culture was cited as an inhibiting factor. Participants talked about the difficulty in developing a learning culture and insufficient knowledge sharing. This would suggest that it is very difficult to motivate employees to share knowledge or engage in learning processes if they are not used to this, or perhaps even reluctant to do so. This is supported by Jones and Hendry (1992) who found that a learning-oriented culture enhances successful learning, whereas it is very difficult to create learning situations in companies with cultures characterised by bureaucracy and inter-functional rivalries and politics. Several cases reported the difficulty in changing existing cultures, with fear of and resistance to change as a barrier to developing a learning orientation. Other factors included inappropriate organisational structures, work pressures and an emphasis on meeting targets, and entrenched attitudes to training.

However, if an organisation has a culture open to learning, this makes it easier to change HRD practices, such as devolving responsibility to managers and employees, and creating opportunities for learning within work activities. Yet, there were fewer positive references to a learning culture than negative comments. Related to culture is organisational structure. Changes in organisational structure, or in job design, can also support the development of a learning culture. New structures can provide employees with more opportunities for learning within work activities, allowing HRD professionals to support work-related learning. Another conducive factor is a flexible organisational structure, which enables jobs to be designed (and re-designed) to facilitate work-based learning and allow time for sharing and reflection upon learning.

4. Pragmatics

The fourth category encompasses pragmatic factors that inhibit learning. These occur at organisational, functional and personal levels. Of these, the most frequently cited issue was the lack of time for learning on the part of employees. Work pressure is so great that it is difficult for employees to find time for learning *in* their daily work routine. In addition, other opportunities for learning *at* work (such as courses) are cancelled/postponed to ensure the workload is completed. This compounds the problem of lack of motivation to learn and impedes the development of a learning culture. Other practical problems include a lack of HRD resources, and a lack of time to develop new HRD initiatives. The lack of HRD resources refers both to financial and human resources - that is money in the form of investment in the central HRD function and departmental budgets, and an adequate number of HRD professionals. However, there was no significant relationship between the organisations that mentioned a lack of HRD resources and the size of the HRD department.

Whilst the lack of time and resources were mentioned as inhibiting learning, similar issues, such as sufficient HRD resources (both financial and human), were mentioned as supporting learning in many cases. Another factor that helped to stimulate a change in HRD practices was the identification and communication of positive results of new HRD initiatives. The increasing use of ICTs might also help address the problems

associated with lack of time and HRD expertise. Computer based learning can help overcome problems of access to learning associated with shift work, for example, and off-the-shelf learning resources can help overcome a lack of internal subject expertise. However, investing in computer based learning requires substantial financial resources and the ability to select appropriate hardware and software. (This latter issue is addressed in the British project, discussed below.)

Discussion

These findings suggest that lifelong learning in and at work is influenced by many factors, and the same factors can be expressed in both a positive and negative manner. Significant similarities were found between the twenty-eight case studies selected from seven European countries. Factors influencing learning were categorised at organisational, functional and individual levels. These included the organisation of work, resources for learning and motivation to learn. Figure 2, below, identifies the three levels of factors and the four main categories of influencing factors – motivation, HRD, culture and pragmatics.

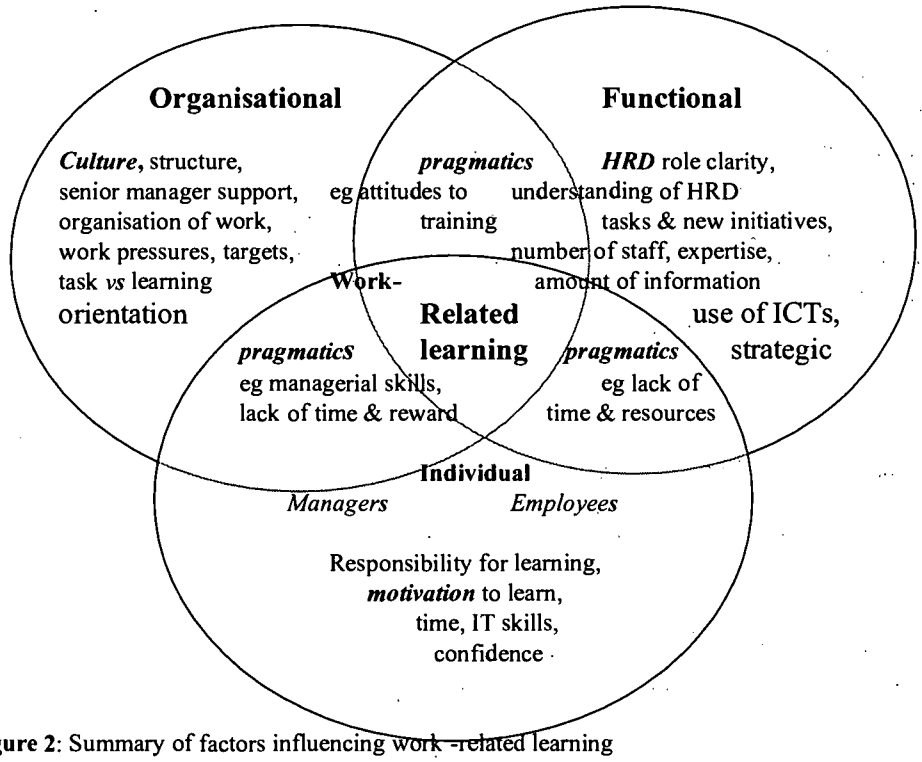


Figure 2: Summary of factors influencing work-related learning

Significant *inhibiting* factors were talked about as: insufficient HRD resources; a traditional culture and entrenched attitudes towards training; business pressures; and poor managerial skills. Key *supporting* factors included: sufficient HRD resources (human resources such as facilitation skills, learning expertise and flexible solutions, as well as financial resources); management support for learning; and the increasing willingness to learn on the part of employees. These factors impact on the various stakeholders in learning (managers, employees and HRD professionals), and impact on organisational culture, the structure of work, and resources. A key finding is the changing role of the stakeholders, the attempt to develop a (new) learning culture, and the restructuring of work.

However, despite being able to identify positive and negative factors, it is possible that some of the supporting factors are necessary but insufficient conditions for orga nisations to become learning oriented. For example, despite increasing HRD resources and senior management commitment, until workload pressures and the organisation of work are addressed, and work time is devoted to learning issues, employees will continu e to see learning as extra to their daily work practices, perhaps even unnecessary and worthless. The need to meet targets and a task orientation impedes the development of a learning environment. Conversely, inhibiting factors might not necessarily preclude the achievement of becoming learning oriented. For example, in the Royal Mail and Rolls-Royce, despite shift work and daily targets, time is being found to enable learning events to be scheduled in work time and in the work environment. It is useful to summarise the European research findings in a figure, presented below, that later contributes to the development of a model of factors influencing learning in and at work.

Having identified some of the factors influencing learning in and at work, th e next section presents the findings from the British project, focusing on factors influencing computer based learning.

Factors influencing learning - in computer based learning

The British research project, funded by the National Assembly for Wales and conducted during 1999-2000, has also been reported elsewhere (Sambrook 2000). In summary, the overall aim was to develop a quality assurance system for computer based learning materials, relevant to the SME context. Two key objectives were to:

- investigate and compare the quality judgements of computer based learning materials made by trainers and learners, and
- investigate the relationship between quality judgements and learning outcomes, the hypothesis being that high correlations would enhance the predictive nature of the evaluation tools.

Thus, the research design incorporated both quantitative and qualitati ve methods. The research included a critical review of literature on pedagogical and quality issues associated with computer based learning, and three empirical studies.

Research design

The aim of the third study was to further test evaluation tools de veloped from previous studies, examine the perceptions of learners regarding their quality judgements of a range of computer based learning materials and compare these with their measured learning outcomes. The study involved 159 participants, recruited from the North Wales area, with a wide spread of age and experience, including employees of SMEs, recent graduates engaged in work experience within SMEs and those not in work but engaged in vocational training. Participants selected one from five differen t computer based learning materials, which offered a range of subjects and IT skill levels. After working on the material in their own time, they were then asked to complete the Learner Evaluation Tool (online or paper version). In addition to a series o f 91 statements against which participants were asked to rate specific aspects of the learning material, learners were also asked to comment upon both positive and negative features of the learning material. This paper focuses on these comments.

Analysis

Content analysis was used to categorise and count the qualitative responses. This quantitative approach provides an overview of the emerging factors influencing learners' judgements of quality. Further analysis examined the rich detail provided in learn ers' comments and explored potential links between the various themes (Sambrook 2000). Overall, from the 762 comments, 33 different factors were identified. However, it is useful to consolidate the factors into more coherent categories. The consolidated categories mirror Bryman's (1988) model of the stages associated with getting in, getting on and getting out of research sites. This has been adapted to identify and capture key issues associated with computer based learning. How to get into, and about, electronic learning sites includes

access issues such as hardware and software specifications, IT skills, confidence, userfriendliness, and navigation. How to get on at these sites includes both *content* issues such as presentation, information, level, and language, and *process* issues such as interest, type of learning and opportunities to practise. The final stage, getting out, focuses on *what* to get out of electronic sites, that is learning outcomes, such as increased confidence, increased understanding , and relevant (or transferable) knowledge and skills, for example. The 33 distinct factors are re-presented in these new categories, as illustrated in Figure 3 below.

Getting in & about	Getting on		Getting out
	Content issues	Process issues	
USERFRIENDLY - ease of use, instructions	PRESENTATION - eg clear, accurate, no mistakes	INTEREST - eg interesting and engaging or boring	KNOWLEDGE – knowledge gained
NAVIGATION - eg moving about package and other sites	GRAPHICS – eg pictures, diagrams,	TYPE OF LEARNING - eg rote, memory, discussion	UNDERSTANDING - eg easy or difficult to understand
IT SKILLS - eg appropriate for beginner	INFORMATION – eg amount, too little or overload	PRACTICE - eg opportunity to practice, experiment, use	USEFULNESS - eg relevance, transferability
HARDWARE - eg size of screen, use of mouse	LEVEL - eg too basic or too deep	INTERACTION - interactive or not	ENJOYMENT - eg fun
CONFIDENCE - eg sufficient level to engage in computer based learning	LANGUAGE - easy or too difficult to read, jargon, definitions	ASSESSMENT - pre-test, self-test, post-test opportunities	CONFIDENCE - eg reduced fear of computer based learning
LINKS - to other sites, content	TEXT - eg amount and balance with graphics	PACE - eg ability to progress at own pace	PROGRESSION - eg ability to learn further
SCROLLING - eg moving about text within pages	LENGTH - eg too short or too long	ENJOYMENT - eg fun	FEEDBACK - eg on tests, wrong answers
INTERFACE	STRUCTURE - eg in chunks, logical	CONFIDENCE – eg ability to reduce fear of computer based learning	
HELP - eg online help facility	INTERACTION - interactive or not	FEEDBACK - eg on tests, wrong answers	
	EXPLANATION - eg how well the material was explained	LEARNER CONTROL - eg choice, self-directed	
	COLOUR - eg use of colour in text, to highlight key points		
	EXAMPLES – use of examples		

Figure 3: Getting in and about, getting on and getting out of computer based learning materials

These aggregated comments identify the various factors at each of the key stages of (computer based) learning. They are presented in descending order of importance, according to frequency of mention. Some factors appear more than once. For example, confidence is a significant factor in terms of access, influencing how (or whether) a learner engages with computer based learning in the first place. Once engaged in the course, confidence will influence how the learner progresses through the material, for example, whether they feel able to experiment, interact and navigate to new sites. Finally, increased confidence could be an outcome of computer based learning, in that the experience helps to

reduce any initial fears of ICTs. Other factors categorised more than once include enjoyment and feedback, again appearing both in process issues (getting on) and outcomes (getting out).

Overall, the most significant factor was the extent to which the computer based learning material was perceived as being *userfriendly* and this was reported as a positive factor in 93% of these comments. It is interesting to note that the top eleven factors (which are indicated by the shaded boxes in the figure) account for two thirds (66%) of the total number of comments. This would suggest that the most important factors influencing learners' judgements of quality are:

- Userfriendly - the extent to which the material is easy to use, with clear instructions
- Presentation - clear and accurate, with no mistakes such as spelling errors
- Graphics - the number and quality of pictures and diagrams
- Interest - whether the material generates interest or is found to be boring
- Information - the amount and quality of the content, whether there is too little or overload
- Knowledge - the extent to which new knowledge is gained
- Understanding - whether the material is easy or difficult to understand
- Level - whether the material is considered too basic or too deep for the learner's current knowledge and skills
- Type of learning - for example, whether deep learning or rote learning, memorising facts
- Language - whether the language was difficult to read, using jargons or lacking definitions
- Text - the amount of text and the balance with graphics

However, this is not to suggest that these factors are exclusive to learners using computer based learning materials relevant to the SME context. For example, similar findings were found in recent action research conducted with business and management undergraduate students (Sambrook 2001).

Discussion

It is important that managers and HRD professionals responsible for selecting computer based learning materials are aware of factors influencing *learners'* perceptions of the quality of the resources. Findings from the British project are similar to the European project in that the same factors influencing learning can be perceived by different learners as being positive or negative. The UK study also confirms results from the earlier European project that factors influencing learning are both complex and subjective. However, it is possible to construct findings from the British research into three hierarchical themes. These are (i) learning, (ii) learning materials, and (iii) computer based learning materials, illustrated in Figure 4 below. At each level, the factors are presented according to the previously-suggested stages of learning - getting in and about, getting on and getting out. Factors identified at the overarching (or generic) level – learning – implicitly influence the two lower (or more specific) levels. Similarly, factors specific to learning materials in general also influence computer based learning materials in particular. At the lowest, or most specific, level the factors are those more significant to ICT forms of learning.

Learning

Getting in	Confidence
Getting on	Level, Interest, Type of learning, Practice, Pace, Enjoyment, Learner control
Getting out	Knowledge, Understanding, Usefulness, Progression

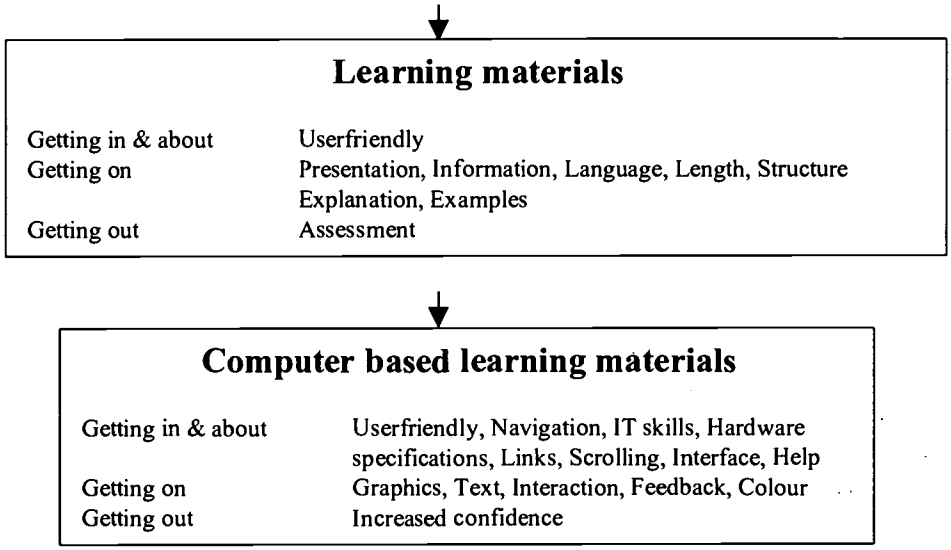
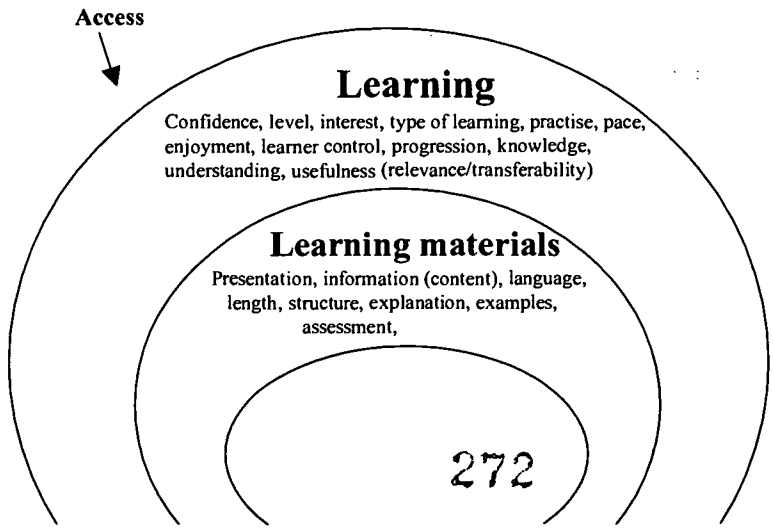


Figure 4: Factors influencing learning: hierarchical themes

As with earlier attempts to classify factors influencing learning, it is problematic assigning certain factors to a particular category. For example, at the generic level of learning, this category inclu des factors relevant to all forms of learning, and this may not necessarily include formal courses. Therefore, assessment has not been included at this top level, but at the level of learning materials, suggestive of more formalised learning, which is, in turn, more likely to incorporate assessment. Another problem is the changing significance of factors between the different types of learning. Distinct aspects of some of the factors become more significant depending on the method of learning. For example, learning materials used through face- to-face contact may not require the same degree of userfriendliness (when a trainer can explain details) as those designed to support distance learning, where the learner could be alone and isolated. In addition, u serfriendliness takes on further significance in the context of ICT based learning materials, where the potentially isolated learner is faced with the added complexity of new technologies. Thus, whilst all forms of learning are ideally userfriendly, this factor becomes most significant at the level of computer based learning. Similarly, issues of the balance between text and graphics, and the use of colour, are important in paper -based learning materials, but take on an additional significance in the ICT context.

Developing this further, and acknowledging the problems identified above, the three themes can form an onion-type model, where generic factors represent the outer skin, or the broadest factors influencing all types of learning. Then as the outer layer is un- peeled, more specific factors are uncovered, first at the level of learning materials, and then focusing in on computer based learning materials. This is illustrated in Figure 5 below.



ICT learning materials
Userfriendly, graphics, text, navigation,
interaction, IT skills, colour, links,
hardware specifications, scrolling,
interface, help facilities
feedback,

Figure 5: A model of factors influencing different layers of learning:

Drawing upon learners' own comments, figures four and five provide useful tools to raise awareness of the whole range of factors learners consider when evaluating the quality of ICT resources . They may provide practical assistance to managers, HRD practitioners and material producers during their decision making processes – whether designing, evaluating or selecting computer based learning materials. They highlight that when learners were asked to judge the quality of the learning materials, they did not only focus on specific features of ICT resources. Instead, they made reference to the much broader issues related to learning in general. However, neither of these figures suggests that learners first consider learning in general, and move down the hierarchy to the specific learning materials themselves. Empirical evidence suggests that the most significant factor influencing learning and the quality of online learning materials was userfri endliness.

A holistic model of factors influencing work-related learning

The analysis so far has concentrated on identifying

- organisational, functional and individual factors influencing learning in and at work, as stated by HRD practitioners, managers and learners, and
- factors influencing (the quality of) computer based learning, as identified by learners.

However, it is useful to synthesise these findings into a holistic model of factors influencing work - related learning. The model, presented in Figure 6 below, provides a systematic way of raising awareness of, and thus being able to cope with, the many fa ctors influencing learning in and at work. The utility of the model is to assist HRD professionals, managers and learners analyse factors both inhibiting and enhancing learning – to help them address the problems and promote the successes.

The model is not intended to represent a hierarchy, and does not position organisational and functional factors above individual factors. The model is intended to illustrate some of factors at organisational, functional and individual levels that can inhibit or enhanc e learning. One is no more important than another, although organisational factors can, and do, influence other factors such as HRD resources and individual time for learning. Similarly, although they are distinct factors, one can interact with another, as illustrated by the interrelationships. Whilst organisational factors can influence how work is scheduled and monitored, causing a lack of time and facilities for learning, individuals, managers and HRD practitioners could act to influence the culture of the organisation, and thus shift the focus from a task to a learning orientation.

There are also connections between the top half of the model, illustrating factors inherent in the work context, and the bottom half, featuring factors influencing learning. For example, an individual's motivation to learn will influence whether they decide to engage in any form of work -related learning, whether traditional class-room, and trainer based or electronic. The European research study found that learning could occur *at* the workplace, in formal classrooms, or in dedicated (quiet and clean)

learning rooms located just off the shop- floor. Learning could also occur *in* work processes, through secondments, projects, coaching and mentoring, for example. Pressures of work, lack of time or difficulties due to shift patterns may all inhibit (or dissuade) an individual from engaging in learning. Yet, the avail ability of ICT learning materials, perhaps in Open Learning Centres, might help overcome some of these organisational problems. An example from the European research was the use of an electronic induction programme for postal workers in isolated locations in the United Kingdom. Conversely, computer based learning can cause other problems, such as isolation (paradoxically) for the learner when sat at a lonely terminal rather than in a training room full of colleagues. An increasingly significant problem is mistrust of the learner by the manager who fails to appreciate the possibility and value of learning by sitting at a personal computer. SME owner/managers who participated in the UK study expressed their concern over employees merely surfing the internet for personal reasons rather than work- related learning. Managers in SMEs also identified the difficulty in assessing the cost of such learning, noting the apparent ease of calculating how much it costs to send an employee off to college for a day. Yet, problems of how to transfer knowledge and skills from traditional, off-the-job learning to the workplace could be addressed by using electronic learning embedded in work processes.

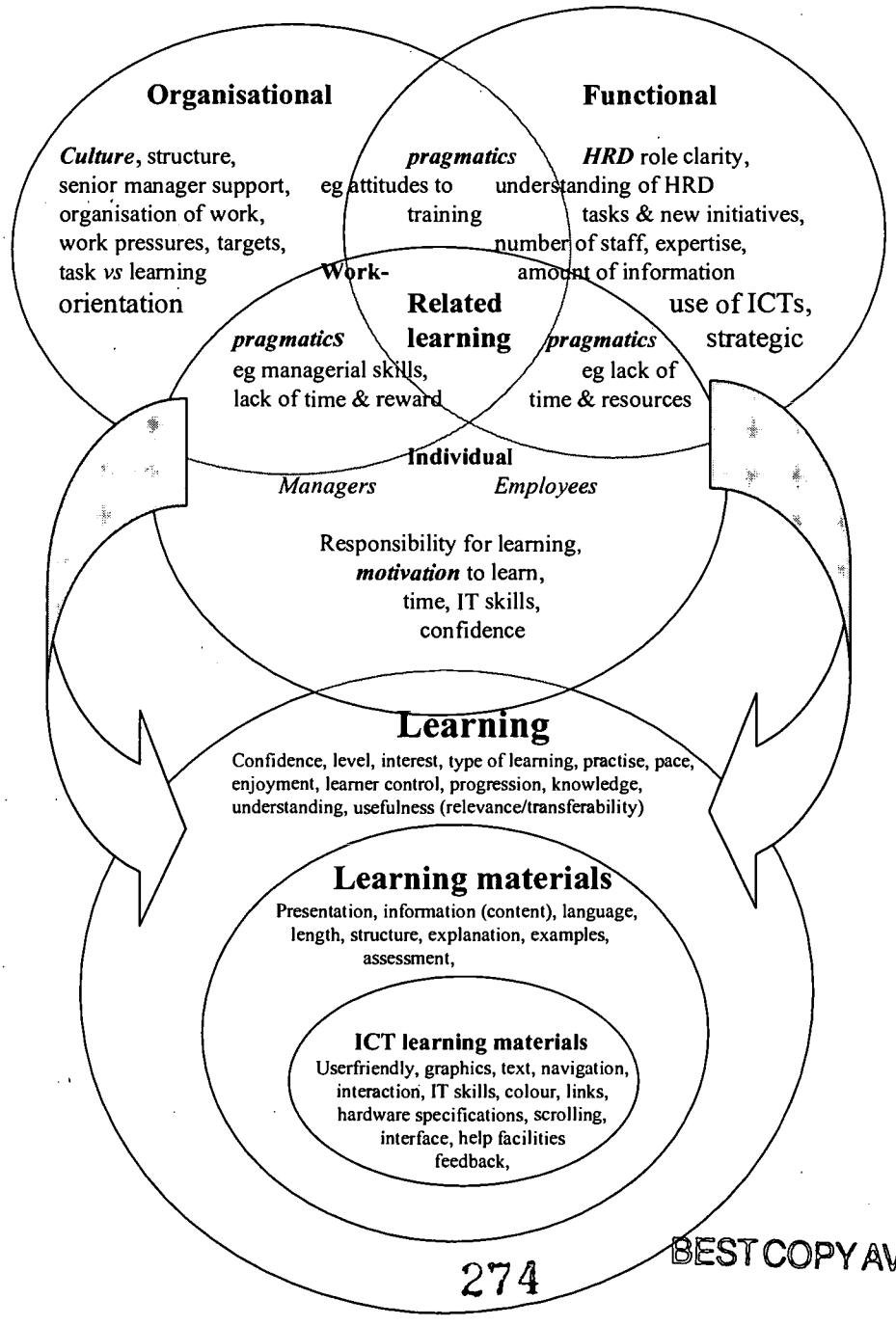


Figure 6: A holistic model of factors influencing work -related learning

The model synthesises the findings from particular aspects of two different research projects, and illustrates how factors influencing work-based and computer- based learning can be linked. For example, focusing on the individual level, motivation to learn on the part of managers and other employees was mentioned as both an inhibiting and enhancing factor in the European research. In the UK project, motivation was mentioned in terms of individuals' confidence to engage in learning (particularly computer based), whether learning materials were interesting, whether the type of learning was appropriate (memorising facts versus discussions), the perceived utility of the learning experience and the degree of learner control. In the European research, at the organisational level, the way work was organised, including shift patterns, performance targets and sheer work load, created barriers to learning and developing learning environments. Yet, many aspects of computer based learning, and identified in the UK project, such as accessibility and flexibility, could help overcome such inhibiting factors and help create virtual learning environments. At a functional level, findings from the European project suggest a changing role for HRD practitioners, where speciali sts become internal consultants, advisers to managers and learners, and facilitators of learning rather than trainers. With the increase in ICT forms of learning, the role of the HRD practitioner might become ICT instructional designer, or purchaser, brok er, adviser and facilitator of electronic learning.

Some conclusions and implications

Lifelong learning is an important concept if national and European governments are to achieve learning societies that are inclusive, cohesive, innovative and economically productive (EU 2001). Across the European Community, organisations are important partners in encouraging learning through the development of human resources. Learning, and re -engaging employees as learners, is a significant element in achieving compet itive advantage. Learning in and at work are important issues in small and large organisations. Empirical evidence from 200 large organisations across seven European countries suggests that lifelong and work- related learning can be greatly enhanced by de veloping organisations as learning cultures, by increasing motivation to learn, by clarifying responsibilities for learning and providing resources, and by the re-organisation of work. However, as Oxtoby (2001) reveals, 'to create a learning culture requi res much more than fine words.' For example, it requires significant commitment from the senior management team, in the form of championing the concept of learning and approving investment (Training Zone 2000a).

Learning can also be enhanced by information and communication technologies (ICT), including new educational and training technologies. A recent survey of employers highlighted the generally positive attitudes to electronic learning as it was convenient and manageable (Training Zone 2000b). Benefits include greater access, reduced contact time between trainer and learner, and reduced time spent off the job (as learning occurs outside working hours). Findings from the British project highlight that, from the learners' perspective, the most significant factor influencing attitudes to electronic learning is *userfriendliness*. This is especially important with the increase in self-managed learning, where the learner could be alone and isolated. However, negative aspects of electronic learning include the impersonality, frustration and loneliness, as well as problems associated with computers crashing and how easy it is to waste time (perhaps confirming what SME managers expressed during the UK study). Within the e-learning context, there is also the assumption that learners know

how to learn effectively (Honey 2000). Recent research highlights the need to have learner support for those participating in electronic learning to enhance learning rather than deal with technological problems (Training Zone 2000b). Motivation to learn was a factor identified in both research projects. However, motivation, confidence and learning skills are particularly problematic in the ICT context (Honey 2000).

It would seem that factors influencing work-related electronic learning vary greatly according to who is learning what, where, how and why. Research findings presented here suggest that the same factors could be both positive and negative features, highlighting the complexity and subjectivity of investigating learners' perceptions of computer based learning. Thus, it is important for managers and HRD practitioners to be able to judge the quality of ICT based learning resources – taking into account *learners'* perceptions - to assure effective learning. This is particularly pertinent in SMEs where - despite the lack of formal HRD infrastructure - computer based learning can offer accessible and flexible learning opportunities. An awareness of these factors is also useful for producers to enable them to design *learner-centred* materials, by taking into account learners' perceptions of quality. For example, a recent survey highlighted some of the negative aspects of electronic learning, including the difficulty in finding learning programmes and software, and materials that were poor in quality, too gimmicky, and not sufficiently developed (Training Zone 2000b).

It is argued that identifying influencing factors is an important step enabling managers and HRD practitioners to recognise how learning might be hindered or helped within work – whether in traditional classroom-based training or through ICT-based learning resources. Whilst e-learning can be as effective as other methods, the future of learning does not lie solely through electronic means. However, having the ability to accurately evaluate the quality of e-learning resources could enhance the credibility of HRD practitioners, particularly as their role becomes more uncertain.

Many of the factors identified in this paper would seem intuitively obvious. Ho wever, the empirical findings of two separate research studies would suggest that these factors are indeed evidence -based. Thus, it is both possible and useful to present this evidence in a model, highlighting for HRD practitioners, managers and learners the range of contextual (organisational), material (HRD and ICT resources) and personal factors influencing work related learning. It is only by raising awareness of these factors that it is then possible to deal with them, to encourage and harness all forms of learning in the context of work. Highlighting key issues raised by learners enables managers and HRD practitioners to first acknowledge, understand and then address such factors. This is especially important as responsibilities for training and work -related learning shift. HRD practitioners are increasingly taking the role of internal consultant, facilitating learning rather than providing training (Garavan 1991, Tjepkema & Wognum 1996, Watkins & Ellinger 1998). Managers are increasingly assuming the role of role model and developer (Ellinger 1997, Sambrook & Stewart 2000, Tjepkema et al 2001). As work becomes more learning intensive, learners and facilitators of learning need to understand factors influencing all forms of learning in and at work.

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Transition From Higher Vocational Education to Working Life: Different Pathways to Working Life

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Transition From Higher Vocational Education to Working Life: Different Pathways to Working Life

by

Marja-Leena Stenström

ABSTRACT

The major long-term goals of Finnish educational policy include that of raising levels of education. This has also been one of the starting points of a reform of vocational higher education in Finland. The legislation establishing permanent AMK institutions (polytechnics) was passed in 1995. One way to evaluate the polytechnics' success in achieving their educational goals is an examination of how their graduates gain entry to working life and what kind of jobs they find there. The paper is a part of a research project dealing with the labour-market placement of AMK graduates with administration and business, technology and transport, and health and social services degrees immediately after the completion of their qualification (Korhonen, Mäkinen & Valkonen, 1999; 2000; 2001; Korhonen & Pesonen, 2000). The data consists of three different questionnaire surveys carried out in the relevant study fields. The findings reveal that AMK graduates have been reasonably successful in gaining entry to working life but that their ability to secure a permanent job and the nature of their tasks vary between different occupational fields and educational backgrounds.

Introduction

The vocational higher education reform was launched with the enactment of legislation enabling experimental AMK institutions in 1991. The legislation making the polytechnics permanent establishments was passed by the Parliament in 1995. The polytechnics evolved from the former vocational colleges, which delivered the highest level of vocational education in Finland.

The major long-term goals of Finnish educational policy have been raising levels of education and enhancing educational equality (Stenström, 1995; 1997). There have been efforts to provide all population groups and regions in the country with equal access to education. This was also one of the starting points of a reform of vocational higher education.

The creation of the AMK institutions can be also considered to improve the status of vocational education and guarantee progress from initial vocational education to higher education. More specifically, European countries have adopted two different educational reform strategies for improving the progression from initial vocational education to higher education (Young, 2000). Some countries, for example the UK are trying to improve access to higher education for those in initial vocational education. Other countries, among them Finland and Austria, are diversifying their systems of higher education by developing higher vocational education for people with completed initial vocational education qualifications. In addition, the Finnish AMK institutions are designed also to attract those learning in general upper secondary schools.

The general objectives of the AMK institutions or polytechnics reform can be summarized as follows (Ministry of Education, 1999):

1. Raising the standard of education. AMK (polytechnic) degrees will be incorporated into the national degree system.
2. Responding to changing expertise and skills requirements. The principles underlying polytechnic education derive from the need for a highly-trained expert workforce on the labour market. This is why the polytechnics are more occupationally and practically oriented than the universities (Cf. Korhonen, Mäkinen & Valkonen, 1999).
3. Making vocational education more attractive. Upper secondary vocational programmes give eligibility for tertiary studies, those completing these programmes being able to apply for admission to AMK institutions or universities. (Cf. Ministry of Education, 1999; Stenström & Lasonen, 2000.)
4. Improving the international compatibility of Finnish vocational education.
5. Making the vocational education system more functional.
6. Decentralising the administration of vocational education.
7. Increasing the regional impact of vocational education.

One way to evaluate the success of the polytechnics in achieving these educational goals and a permanent status in working life is to examine how their graduates gain entry to working life and what kind of jobs they find there. The working-life value of the AMK institutions depends on how working life receives their graduates and on the qualities of the AMK institutions itself. In general, the graduates' employment and job status and earnings can be seen as the most valid indicators of how highly the qualifications produced by the AMK institutions are regarded by enterprises and society.

The study focuses on the transition from the polytechnics to working life among AMK graduates with administration and business, technology and transport, and health and social services degrees. AMK degrees are expected to provide AMK graduates with qualifications equipping them for tasks requiring professional expertise (expert, planning and managerial positions). The task of the study is to examine how the AMK graduates enter working life and find employment there. A particular interest of the study is analysing the graduates' placement in working life by study field and educational background. The main research questions are as follows:

- What differences in placement in working life can be found among grad uates representing different study fields and educational backgrounds?
- Which factors explain the graduates' successful entry to working life?

Data and Method

This paper is a part of a research project dealing with the occupational placement of AMK graduates immediately after their qualification (Korhonen & Pesonen, 2000; Korhonen, Mäkinen & Valkonen, 1999; 2000; 2001). The data consists of three different questionnaire surveys carried out in the study field of administration and business (n=896) during the academic year 1996-1997, in that of technology and transport (n=1021) during the academic year 1997-1998, and in that of health and social services (n=925) during the academic year 1999-2000. The graduates had left their AMK institutions some six months or a year earlier, representing the first generation of polytechnic graduates in Finland.

Sex, age and educational background varied according to study field. Most of the administration and business (70%) and health and social services (93%) graduates were women, most of the technology and transport graduates (83%) men. The oldest graduates were found in health and social services (average age 29 years), followed by technology and transport (28 years), with administration and business graduates being the youngest (27 years). A fourth of the AMK graduates had taken a vocational upper secondary qualification

before entering an AMK institution, half of the graduates had completed general upper secondary education, while a third had both general and vocational upper secondary qualifications. Most (92%) of the administration and business graduates had passed the Matriculation Examination. A third of the technology and transport graduates had completed only vocational upper secondary education, over a third of the health and social services graduates both general and vocational upper secondary education. The highest level of basic education was found among the administration and business graduates, the lowest among the technology and transport graduates.

Findings

The first question was whether the AMK graduates had been able to gain a job. What is interesting in this context is whether there are differences between study fields.

Table 1
AMK Graduates' Employment Status by Study Field

Labour force status	Administration and business (n=892) %	Technology and transport (n=1018) %	Health and social services (n=923) %	Total (N 2833) %
Employed	73.2	79.0	74.2	75.6
Unemployed	11.7	8.9	9.9	10.1
Other	15.1	12.1	15.9	14.3
Total	100.0	100.0	100.0	100.0

$p < .05$

The results reveal that about 75 per cent of the AMK graduates had found a job. Most of them are wage earners, only a few are freelancers or entrepreneurs. The unemployment rate was about 10 per cent, while nearly 15 per cent were engaged in activities outside the labour market (studying, taking care of children). Engineers had been the most successful (79%), administration and business graduates the least successful (73%) in finding employment.

One of the issues addressed in the study was how the different educational backgrounds

of the AMK graduates affect their entry to working life.

Table 2

AMK Graduates' Employment Status by Educational Background

Labour force status	Vocational upper secondary education (n=554) %	General upper secondary education (n=1368) %	Vocational and general upper sec. education (n=870) %	Total (N 2792) %
Employed	83.2	69.1	80.6	75.5
Unemployed	7.9	11.3	9.9	10.2
Other	8.8	19.6	9.5	14.3
Total	100.0	100.0	100.0	100.0

$p < .001$

The figures show that there is a statistically significant difference between graduates with different educational backgrounds. Those who had finished vocational upper secondary education before entering an AMK institution had been most successful in finding a job, while success had been most modest among those graduates whose educational background was limited to general upper secondary education. This is unexpected because in general the academic track is smoother as a route to working life than the vocational track. Additional analyses are needed to explain the result.

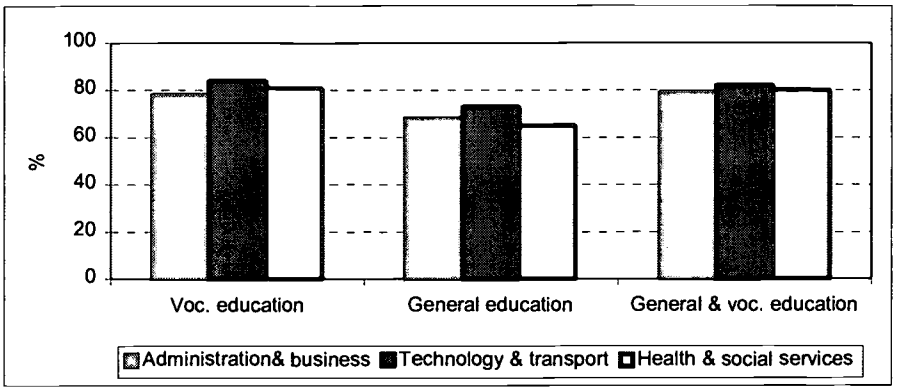


Figure 1. Employed AMK Graduates by Study Field and Educational Background

The results of the variance analysis are similar to those of the cross-tabulations. Both study field ($p < .05$) and educational background ($p < .001$) have a statistically significant connection with finding a job, but there are no two-way interactions. Among the graduates, engineers with completed vocational upper secondary education had been the most successful jobseekers, health and social services graduates with only general upper secondary education the least successful ones.

Finding work job is only one measure of one's placement on the labour market. It is more informative to examine what kind of jobs the graduates have found.

Table 3

Regularity of Employment by Study Field

Regularity of employment	Administration and business (n= 685) %	Technology and transport (n=807) %	Health and social services (n=692) %	Total (2184) %
Full-time job	88.9	96.5	77.6	88.2
Part-time job	9.3	1.9	14.6	8.2
Odd jobs	1.8	1.6	7.8	3.6
Total	100.0	100.0	100.0	100.0

$p < .01$

The findings indicate that the AMK graduates have been reasonably successful in gaining entry to working life but that their ability to secure a permanent and full-time job. Most (88%) AMK graduates had a full-time job, but only about a half of them (57%) were permanently employed. Engineers seemed to have had most success in finding full-time (97%) and permanent (69%) employment, health and social services graduates least success. Only a third of them had found a permanent, 78 per cent a full-time job.

In health care the employment situation remains rather poor despite improved demand for labour. Just graduated nurses in particular have a hard time finding work in Finland: only some one out of five fresh graduates finds employment immediately after completing their studies, while about the same proportion leaves the country to work abroad. In the 1990s the depression affected also the public sector, where most (90%) of the health and social services graduates work (Korhonen, Mäkinen & Valkonen, 2001; Savola, 2000).

Polytechnic degrees should qualify their holders for tasks requiring professional expertise (expert, planning and managerial positions). Thus, it is of interest to discover the status of the jobs that the graduates have found on the labour market.

The results, based on the graduates' own answers, reveal that the majority of the engineering graduates considered that they were carrying out the duties of a professional, whereas a minority of the administration and business and the health and social services graduates thought that they were performing worker-level tasks rather than expert-level duties. To examine the findings further, the graduates' status in the organisation where they worked was subjected to a variance analysis. It was found that graduates placed in worker-level positions differ in their study fields ($p<.001$), and there are a two-way interactions between study field and the basic education $p<.05$).

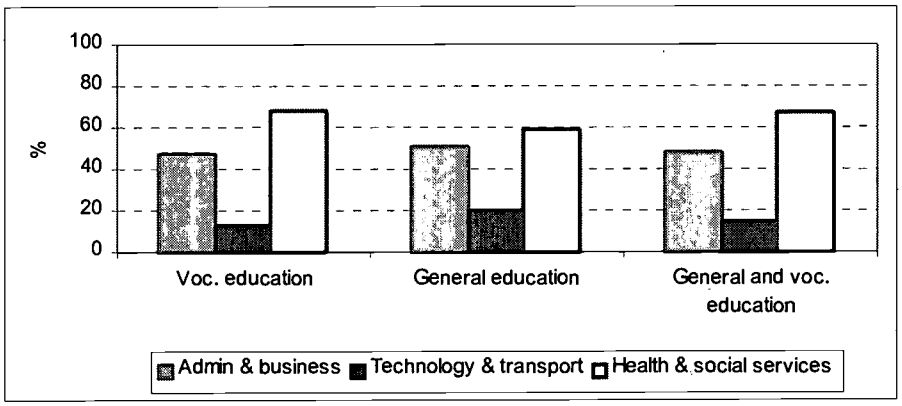


Figure 2. AMK Graduates in Worker -Level Positions by Study Field and Educational Background

Figure 3. AMK Graduates in Managerial Positions by Study Field and Educational Background

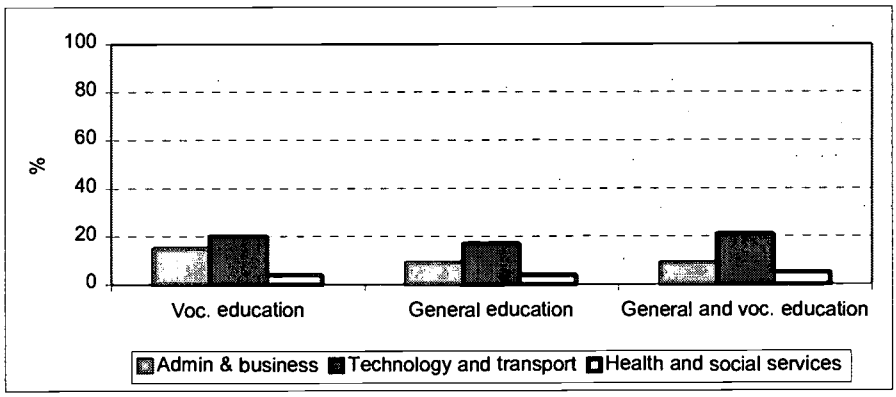
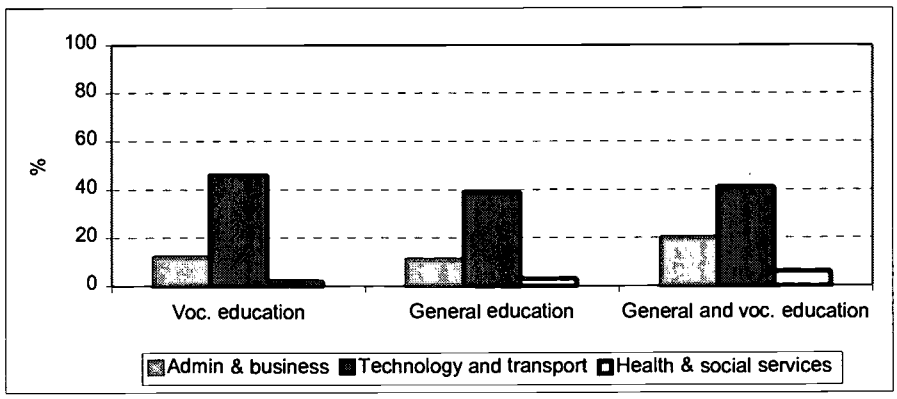


Figure 4. AMK Graduates in Expert-Level Positions by Study Field and Educational Background



Most of those health and social services graduates (68%) who had finished only vocational upper secondary education were performing worker-level duties. Worker-level placements were most rare among engineers (13%) with vocational upper secondary education. Work experience from one's own professional field does not seem to correlate with the status of one's job.

An examination of graduates in management-level positions reveals that there are differences in job placement according to both study field ($p<.001$) and relevant work experience ($p<.001$). There was no statistically significant difference across study fields, but study field and work experience from the relevant occupational field seem to interact. Engineers with work experience and the Matriculation Examination and a vocational qualification or only with a vocational qualification (20–21%) were most likely to end in managerial positions. Health and social services graduates with only the Matriculation Examination and without relevant work experience were least likely to be placed in management-level jobs. Altogether, it is rare to reach a managerial position in the early stages of one's career.

Being employed as an expert seems to be linked with study field ($p<.001$) and educational background ($p<.01$). An engineering degree and a vocational upper secondary qualification were the strongest predictors of an expert position.

One of the most concrete measures of the occupational status of the AMK graduates is income. A comparison of incomes across study fields showed that the technology and transport graduates had the highest incomes, the health and social services graduates the lowest ones ($p.<.001$). Comparing income and educational background indicated that the highest incomes were enjoyed by those graduates who had only vocational upper secondary education, with those who had completed both general and vocational upper secondary education coming next ($p<.001$). It seems that the vocational track to the AMK institutions leads to a better income than the general route. Further analysis is needed to explain this result because in general the academic track is more profitable than the vocational track.

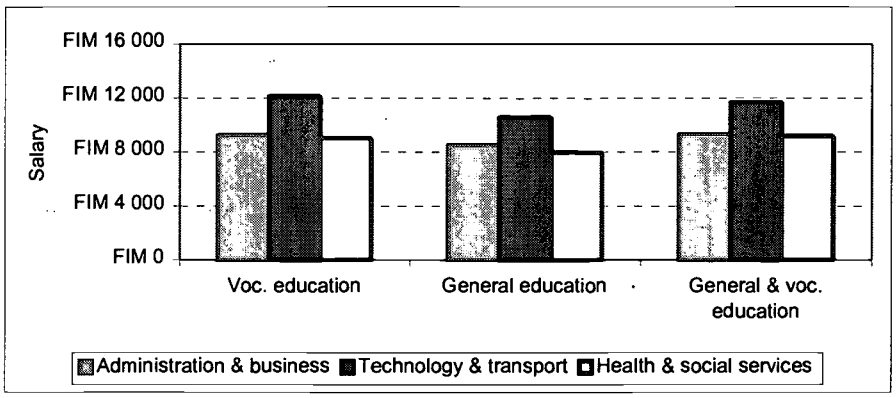


Figure 5. Salaries of AMK Graduates with Relevant Work Experience by Study and Educational Background

Having vocational upper secondary education as one's educational background seems to be connected with one's previous work experience and also with study field. The results of the three-way variance analysis showed that incomes differ by study field, educational background and previous relevant work experience. The highest salaries (FIM 12,127) were paid to engineers with a vocational upper secondary qualification and previous work experience in their professional field, the lowest income (FIM 7,678) to AMK graduates in administration and business with a general upper secondary qualification and no relevant work experience in their occupational field.

Satisfying duties can be seen as an instrumental working-life value.

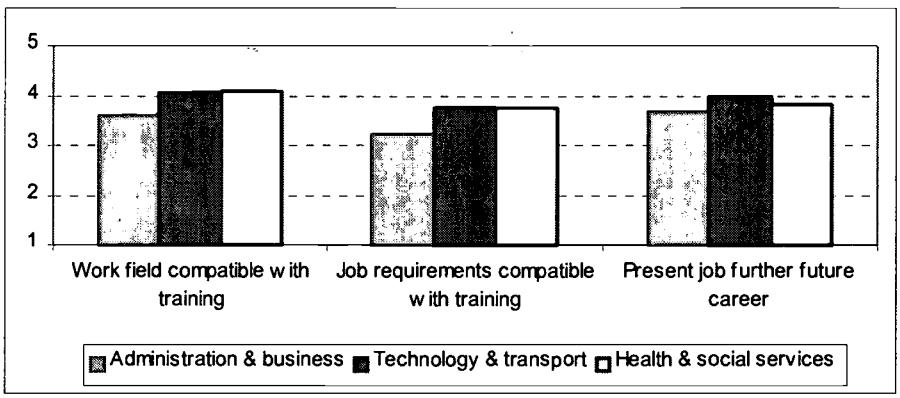


Figure 6. AMK Graduates' Job Satisfaction by Study Field

The results concerning the AMK graduates' job satisfaction reveal that job satisfaction is highest among those who work in health and social services. This result was surprising,

because their incomes were the lowest among the three groups of AMK graduates compared here. Least job satisfaction was felt by those administration and business graduates who had the highest basic education among the AMK graduates compared.

Conclusion

The findings show that the AMK graduates have been reasonably successful in gaining entry to working life but that their ability to secure a permanent job and the nature of their tasks vary between different occupational fields. Engineers have had most success in finding employment and securing a permanent position and a high-status job. Their good placement may be due to the fact that the pre-AMK technical colleges already represented vocational higher education in Finland and that the status of these colleges was high. Technology has been a favoured occupational field among male students. By contrast, the health and social services graduates failed to find a permanent job and earned low incomes but were satisfied with their work and working conditions. In general, health and social services has been one of the study fields most favoured by female students, whereas administration and business has been one of the largest study field in the AMK institutions. Dissatisfaction with one's job was highest among the administration and business graduates. Administration and business has traditionally been a study field less occupationally specific than technology and transport and health and social services. Also, the administration and business curriculum delivered by the AMK institutions has changed a great deal from the previous curriculum of the commercial colleges because the programmes have been made longer. A finding of the study is compatible with the fact that there is a close connection between the educational and the labour market.

Moreover, the results concerning the educational background showed that the vocational track is an attractive alternative as regards transition from school to work, although this is true mainly of the field of technology and transport. More research is needed on the relative attractiveness of the vocational and the academic track to vocational higher education. Furthermore, findings concerning AMK graduates should be compared with the results of studies of university graduates, similarly based on comparisons between study fields (Korhonen, Mäkinen & Valkonen, 1999; 2000; 2001).

As we consider the findings we must keep in mind that they describe a very short period of time between the conclusion of one's studies and placement on the labour market. Gaining a firm foothold on the labour market and finding a permanent position will take longer, and it is in the longer term that also the effect of AMK graduates' study fields and educational background on their labour-market placement will emerge more clearly. Moreover, the likelihood that AMK graduates will find employment, continue their studies or fail to find a

job depends on competition on the labour market between graduates from different types of education. It takes time for AMK graduates and AMK degrees to become well-known on the labour market and in industry and trade.

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WEPP

The Work Environment Pedagogy Project

INDIVIDUALS' DISCOVERING, INTERPRETING AND CHANGED PERCEPTION OF WORK AND LEARNING ENVIRONMENTS

Research and work plan with short descriptions of component projects

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INTRODUCTION

CHANGE AS A PEDAGOGICAL BASIS FOR IDEAS

Humans have always lived with change – political change, economic change, technological change, social change, etc. The individual's experience of the situational changes that occurring societal forces bring about successively contributes to a slow modification of that individual's (and other's) perspective of his/her existence. However, this dynamic does not merely have import for the individual's life; the changes additionally challenge society's given conditions and contribute in a fluctuating manner, both directly and indirectly, to the expansion and the break-down of existing societal institutions (Dalin & Rolff, 1994) *The nation, the home and the family, the mass media, the church, the work place, the school,* etc. are examples of institutions that are directly affected by this.

Ideologically, *the nation, the home and the family* are perceived in the western world as society's most important social components, together with class, race and cultural heritage (Larsson, 1994). If any of these institutions are given higher priority than the others, this entails that the others become less important and must therefore subordinate themselves. Accordingly, placing the nation first implies that the individual must submit to the needs of the nation and sacrifice him/herself for said nation. If, for whatever reason, this ranking is changed (for example, that the nation's ranking changes places with the individual's) then the other groups and loyalties are subordinated accordingly. The EU-community is a model example of where such a change in priorities on the systematic level has taken place. Even if the individual is still ranked at a higher level and has greater freedom in relation to his/her own state, certain people within the EU are uneasy. The reason behind this uneasiness is that these people perceive that the breakdown and subordination of the formerly secure nation is occurring as a result of European integration. Local political goals are always close to an individual's heart and are therefore considered to be of great importance for the local community. Consequently, it can be incomprehensible for an individual when, for example, local political goals must subordinate to overall European policy. The dynamics of societal forces, which often form *system conflicts*, force forth even in such cases alternative proposals for solution. This is applicable to the battle between local goals and a union's overall policy. Changes and successive adjustments such as those previously mentioned are part of individuals' *everyday learning*. The possession of learning is dependant upon the possibilities for development or the potential for development that exists in the environment in which a person finds him/herself. The process of everyday learning is nevertheless pivotal. This process is pedagogical, since it in different forms represents individually connected ways of giving notice to and changing the effects of societal forces' dynamics into understanding, in conjunction with experiences of one's own actions (Lewin, 1951; Piaget, 1970; Kolb, 1984; Carlgren, Handal & Vaage, 1994; Boud, 1995; Treekrem, 2000). The effects of societal forces' dynamics become, through their connection to individuals, a didactic tool for intervention that communicatively, cognitively and emotionally successively changes the structure of society. The result of this structure is integrated more or less conspicuously into humans' consciousness and existence. This change occurs on both the individual as well as the institutional level.

PERIOD TYPICAL CHANGES IN INSTITUTIONAL ARENAS

Home and the family

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Research in the 1990s shows that *the home* and *the family* have changed considerably during the past 50 years. Dalin and Rolff (1994) assert that, for example, dwellings have become smaller, siblings often are in the same age group and both parents work mainly outside of the home (fully 70% in Scandinavia, 40% in West Germany and 90% in the former East Germany). Of the marriages that take place in Europe's larger cities, approximately half end. There are also signs that people in society more and more begin to see the necessity of greater involvement in solving domestic problems and conflicts. Different societal institutions are involving themselves more and more in the raising of children and youths. A clear change in trends is the conspicuous youth cultures that, in different ways, take over the influential and educating role that parents and others have previously held. This change of role models is an indication of problematic domestic changes in society. Many youth cultures precede dynamic uprisings that can also derive from societal forces. In reality, societal forces intervene wherein interaction between individuals, institutions, and families change through the new growth of youth culture dynamics. Adults, who live in safe, conservative environments, often see and worry about children and youths' growth conditions. In a time of very fast and continual changes, this becomes even more apparent (Rolff & Zimmermann, 1990; Ziehe, 1990). However, the special conceptual nuances that already exist or are being successively created in distinctly youth environments create an essential pedagogical usefulness that deserves to be paid attention to in children and youths' everyday learning. The culture of youth can consequently be an example of development potential where learning is attractive. Additionally, this often builds upon other ideas and forms of expression rather than the main ideas and pedagogy that are supplied in other learning environments where learning and rearing compete with the culture of youth.

Mass media

The *mass media* is a dynamic intervention tool with huge penetrability. Radio and TV programs, magazine articles etc. contain in their various formulations reasoning that contributes to the successive transformation of society's structure and human's existence. This occurs even if the message does not always contain arguments that are based upon a widely accepted didactic base. As an example of this, the critical *why* question often shines in its absence, whereas it should receive a prominent position in relation to an actual problem. A typical example of this is mass entertainment, which, with the help of TV and videos, represents a unique possibility for giving vision to both established and new ideals and tendencies in the surrounding world. This takes place legitimately and often uncritically. At the same time, certain children and youth's perceived emptiness in life is filled and changed by the dynamics of the mass media. Additionally, entertainment in this genre defines both previously accepted as well as new, incongruous values and norms in society. Dalin and Rolff (1994) maintain that children in the western world spend more hours in front of the TV than they spend on schoolwork. Children and youths with social handicaps spend the most amount of time in front of the TV screen and, additionally, it is these same children that, according to the authors, often become interested in "the less positive programs". Increased awareness of the mass media's strong influence intensifies the feeling that an ideological conflict exists between the so-named *written* and *visual cultures* – between school's laborious learning process on the one hand and a quick path to new information on the other. This is a strong societal force that successively eradicates traditional hierarchies, a development that leads to an expanding society with a flat "horizontal" profile. One consequence of the individual and collective learning process that is initiated by the mass media is that different generations eventually lose contact with one another. Individuals belonging to the younger generation experience and

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learn that the basis for values and norms develops in the attractive "peer culture" in which the youths' ideas are supported by the media's unbridled power of reference. The mass media's power of reference is perhaps the best example of Durkheim's (1956) old thesis that every society, with the level of development taken into consideration, possesses an educational system that exercises an irresistible influence on its individuals. This manner of calling attention to and realizing the dynamics of the mass media is fuelled by a person's internal and external motivation, in a sort of combination with one another. Modern visual culture is most often audiovisual. Therefore, experiences are easily connected (i.e. without any major intellectual resistance) to feelings that are the individual's cognitive motor.

The church

The church has traditionally played a central role in the formation of people's values and norms. Nevertheless, for the time being, the number of individuals or groups in the Nordic countries who have ties to the church or other Christian organizations is somewhat limited. Instead, a tendency exists for nations' new citizens, such as immigrants, to bring with them different perspectives towards religion and societal morals. Modern youths who grow up without the traditional "cultural baggage" that earlier generations were raised in, must therefore, to a larger extent than before, adapt themselves in regards to varying multitudinousness. This pertains to both cultural forms and religious beliefs. Both teenagers and older youths are in this manner forced to define their own values and norms. In this sense, the support that parents, other adults and the church formerly provided discontinues. This automatic societal change will, in stages, become of determining importance for the growth of the new generations' ethical attitudes.

The work place

Work places, both national and international, are more and more influenced by political, economical, technological and social changes. To the extent that the shape and content of work is influenced, there are also consequences for the type of competency and qualifications desired. During the last few decades a tendency has existed in the Nordic countries for companies to advertise the need for specialized skills and multi-qualifications to a larger extent than society has earlier been familiar with. Even *work* as a concept has changed character and acquired a new meaning for many people. Physical toil has to a large extent been replaced with mental toil and this entails an increased pressure on an individual's intellectual capacity. Additionally, a demand exists that current work places should fill many of the social and personal needs that earlier could only be met through one's family and local environment. Today's job seeker looks not only for a job, but for a career as well. The individual's self-confidence is therefore attached to an even larger extent than earlier to *what* he/she is and to a lesser extent to *who* he/she is (Dalin, 1987). Creation of individual psychological "owner relationships" in work culture involves, for many work places, a noticeable contribution to satisfactory turnover. Giving employees the possibility to participate in continuing education, as a first step in their career in business, is often an appreciated way to establish individual "owner relationships" in work culture (Dalin & Rolff, 1994). The extent and importance of nations' internal business strategy for continuing education gains an interesting perspective when the authors maintain that the costs for such continued education in OECD countries is higher than those countries' total acquired costs for post-secondary school and university sectors. Large portions of this type of education comprise, amongst other things, studies connected to personal growth, social intercourse, leadership and work culture. The reason for this large share of con-

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tinued education within the business world can perhaps be understood through the description that Husén (1994, p. 173)* gives. He maintains that: "...while science becomes more and more international, the goal of education, above all fundamental education, is to more and more serve national interests: one's own countries' need for highly qualified manpower, and one's nations' ability to compete in the international market". Husén is of the opinion that this paradox and the conflict of interest it signifies between the search for universal truths and contributions to increased national power can perhaps be solved in Europe through the process of regionalization which is taking place. Dalin and Rolff, meanwhile, maintain that the industries that will survive hard international competition are those that have the ability to develop a learning work environment. This pertains to industries that ready themselves and obtain the capacity for creative development and adjustments and which show the will and ability to continually change and create a new future for their business. It is quite simply a question of the individual learning to analyze, interpret and understand different societal forces and, moreover, dare concentrate his/her behavior in accordance with the goals that become evident.

School

Schools of all sorts and different levels crave continuous change and the schools that are considered to be good, effective and successful, renew themselves regularly. Compared to the industrial world, school research shows dissimilar, contrary results. Strong organizations are those most willing to optimally use resources in order to obtain even better results. Edmonds (1982) already demonstrated 20 years ago the definition of an effective school. There must exist, for example:

- A school leader with leader qualities who focuses on teaching
- A curriculum where the central subjects are prioritized and where other extra-curricular activities receive less attention
- A favorable "knowledge" and learning atmosphere, in which the purpose is that every single person should endeavor to grow and develop
- Teachers that define clear goals and who help students perform at a optimum, in order that a certain, common-denominator-level of achievement can be reached
- An environment where leaps of ability are noticed and verified

These five points can initially be perceived by the reader as being well known. In the meantime, however, Dalin and Rolff (1994) criticize Edmonds' stated signs of a effective school. The authors maintain that empirical research of the type that Edmonds (1982) undertook fits in poorly with the results of school research recently published in Germany and England. Directly contrary to Edmonds' American research, the European studies show that there clearly does not exist simple, valid and irrefutable scientific criteria to measure a school's quality. The authors Dalin and Rolff mainly criticize Edmonds' strong accentuation on student achievement, since they maintain that important questions surrounding the schools' *atmosphere* and *working environment* are not included in the studies. Good and Brophy (1986) also support this critique of American school research; already during the mid 1980s, they stressed that American school researchers' research is faulty. The concept of *school quality* is limited to comprising only *school effectiveness*. Consequently, in practice, the concept of school effectiveness (in the sense that Edmonds uses the term) merely means *student achievements*.

* The author has taken the liberty to translate this passage himself

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Dalin and Rolff even criticize the school atmosphere-oriented research of the type that (for example) Brookover, Beady, Flood, Schweitzer and Wienbaker (1979), as well as Rutter, Maugham, Mortimore and Ouston (1979) stand for. Dalin and Rolff maintain that large demanding studies have a tendency to instrumentalize a school's atmosphere and therein a school's pedagogy. Consequently, the risk is that the betterment of a school's atmosphere can only be perceived as an aid for achieving increased effectiveness and better performance results. Uncertainty exists in that important values may be eliminated, amongst other things, the different qualities that upbringing and inter-personal learning have to offer. Today, the majority of people that deal with the formal educational system are most likely in agreement that atmosphere and working environment are important factors which affect the results of secondary schools (post-elementary schools), regardless of one's perspective of the meaning of the concept of school quality. Society craves certain demands that parents, teachers, school leaders and other personnel must work with and derivate a working order from. The curriculum's main goal and guiding principles become in this manner society's control mechanism. However, Gesser (1985, p. 33)* maintains that: "the only homogenous aspect of 'education' is a type of interaction in which learning can happen". Goals and guiding principles in a school's curriculum should therefore always, in accordance with Gesser's perception, contain a certain scope for deliberation. At the inception of the 21st century, however, it appears to be relatively easy, at least for the population of the western world, to intuitively understand why schools' overall pedagogical problem is becoming more and more complicated and that curricula's goals and guiding principles therefore need a certain flexibility. Yet, it is not quite so easy to understand what the consequences of the formal educational system (which are just emerging) will have for individuals. Society's increased complexity must be dominated by motivational plans of action in schools as well as, amongst other things, models for learning characterized by discovery and with intrinsic personal consequences for the individual. In this manner educated people can, through their own actions, influence and change their thought processes and emotional lives, including their own perceptual, analytical and interpretational abilities. Additionally, this gives new experiences and deepened understanding of the dynamics of societal forces, in conjunction with acquired experiences. A motivated and challenging base that allows continuous transformation of the individual's consciousness should accordingly embrace the learning individual's dominant emotional, cognitive and social processes. This pertains to all characters in an environment. Prerequisites for all learning rest therefore on schools' ability to elucidate a base upon which knowledge of, understanding of and relation to the effects of societal dynamics can be established. In other words, this means that pedagogical learning environments must be created in schools. Additionally, this entails, amongst other things, a clarification of the connection between the individual and the prerequisites that are valid in a school setting, i.e. the conditions that societal forces' dynamics have created.

WHAT IS WORK ENVIRONMENT PEDAGOGY?

According to what is understood from above, there are different reasons for why societal institutions such as nations, schools, work organizations and home environments – i.e. the external physical environment – change. A central task for every institution is to identify needs and interpret the consequences of occurring changes. In order to be able to evaluate the effects of internal change processes in stable, to some extent static institutions it is, however, often necessary to develop and implement intervention programs, whose task it is to start a pedagogical learning process within an institution. The individual's consciousness receives in this manner a determining role in the internal mental arena, in which all potential for change of the political, economic, technological and social sort can be experienced, interpreted and given

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individual meaning in conjunction with external change. Therefore, it is characteristic of the aforementioned examples that all presuppose a human presence. The interactive dynamics of societal forces always change given external conditions first, which then creates a need for internal mental renewal. In order to give attention to, interpret and realize this need for renewal, people's experiences of these things must, together with insight into the fact that they are necessary, receive a certain mental scope in the individuals that operate in the aforementioned environments. The future actions that this change craves must therefore relate to a consciousness of that change in order for the individual to be able to take advantage of his/her competency and qualifications. This pertains to both external relative needs – caused by external physical environmental changes – and internal individual needs – anchored to the individual's personal abilities, proficiencies and ways of dealing with situations. Moxnes (1986, p. 52)* maintains, for example, that:

> *... The learning process always entails a personal involvement – the whole person, both with thoughts and emotions, is involved in the learning process. And as a rule it is self-initiated. Even when the stimulation to learn is external, the feelings of discovery, of understanding, of development and of mastering come from within. It is also penetrating. It affects one's actions, one's attitude and perhaps also the personality of the person who learns...*

The effects of societal forces' dynamics in the institutional environments that have been described demand a competency for development in that individual, i.e. the inclination to be able to change one's understanding in pace with changes in order to master versatility in the surrounding world. Everyday learning as a type of learning is, therefore, central in both creative work and in the process of change. Lennerlöf (1992) regards humans' everyday learning as a process which depends upon the learning opportunities that exist in the environment he/she resides in.

> *... what this learning includes, how it happens and which factors promote or impede a developing acquisition of knowledge can be summarized under the designation "work environment pedagogy"* (p. 32)*.

The institutional qualities described earlier comprise activities that can, in different ways, be defined as work environments. The term *environment* has a natural association with the expression *work* or other forms of human *activities*. The work environment originates as a result of human occupation. In this manner, the work environment can even encompass teaching environments. Additionally, this starting point makes it possible to connect externally related needs (caused by the external physical environment) to children as well as to parents, students, teachers, employees and employers. *Everyday learning* in working and teaching environments is therefore construed to mainly be a potential for change, deeply rooted within individuals as a pedagogical phenomenon. *Work environment pedagogy* as a concept comprises both rearing and learning, focusing on an external physical horizon as well as an internal mental arena.

WORK ENVIRONMENT PEDAGOGY RESEARCH GOALS

Studying work environment pedagogy should in this case involve an attempt, in work and teaching environments, to investigate people's possibilities for education, teaching and learning (to the extent that they appear) by finding out:

1) What does everyday learning include and mean in existing work and teaching environments?

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2) How does everyday learning happen – what individual variations can be observed?
3) What factors further or impede the development of everyday learning in existing work and teaching environments?

The first question comprises the meaning of everyday learning and there are several reasons for studying the concept's significance. Human development is characterized by continual learning. Therefore, it is natural that everyday learning's pedagogy directs itself towards the work and learning environment that offers different forms of learning conditions for the people that are part of that environment. Everyday learning is characterized both by patterns in work and teaching environments as well as a cause -relationship to its creation (the dynamics of societal forces, new technology, resources, other institutional or organizational characteristics or strategies, etc.), experiences and actions in that environment. Additionally, everyday learning is characterized by teamwork between the individual and the environment.

The second question deals with the individual's personal education and growth through everyday learning. The question is clearly connected to the individual. How the actual learning process (in other words in which way the interaction between the individual's internal mental arena and the surroundings' external physical environment) should be understood comprises both an ontological as well as an epistemological question. The outcome depends upon whether one imposes a rationalistic or non-rationalistic perspective on human action, development of knowledge and learning. According to Ellström (1992), the rationalistic perspective entails placing the emphasis on a goal oriented, technically instrumental taking of action with analytical thinking as the dominant thought process. The fundamental model for such a theory is, according to the author, explicit knowledge through a "think-first-act-later" action taking in a formal learning environment (p. 90). On the other hand, the non-rationalistic perspective, according to Ellström, entails placing emphasis on a more intuitive contextual action taking, based upon reflection after action. Consequently, the non-rationalistic perspective implies searching for implicit knowledge via intuitive thinking by, for example, an "act-first-think-later" action taking, stemming from everyday problems ("situated learning" – Ellström 1992, p. 90; Säljö, 2000, p. 35; Treekrem 2000, p. 120). Everyday learning can unquestionably be regarded from different perspectives. Nevertheless, the non-rationalistic perspective contains qualities demanded by the continuous learning occurring in work or learning environments, whose task is to maintain, further develop and renew the individual's basic competency. The acquiring of new knowledge, skills and behavior in accordance with the rationalistic course of action is, however, in many cases, both a desirable value as well as a necessary methodology, depending upon the learning individual's earlier experiences. Consequently, a successful educational institution or work environment should perhaps strive after a combination of everyday learning and formal instruction.

The third question is clear-cut and demands answers from everyday learning's tangible conditions. The question cannot be given a-priori, since it is dependent upon the individual, dependent upon the individual's surroundings and the societal forces that occur. In other words, work environment pedagogy involves examining work and learning environments' conditions, proceeding from applicable conditions with respect to their ability to foster learning, i.e. individual rearing and knowledge building qualities. In this manner, it is a pedagogical task, qualitatively speaking, to in every separate case determine and study the factors that further or impede the development of everyday learning in existing work or learning environments.

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PROJECT BACKGROUND AND GOALS

BACKGROUND

The form and content of future careers is an unknown. Computerization, automation and advancements within the multi-media paradigm contain, however, good possibilities for the positive development of society, as long as this potential can be applied in a satisfactory manner. This pertains to both schools and teaching institutions of different levels as well as other private and public fields of activities in society. Today, the Nordic nations more and more choose to take overall responsibility for societal development away from the center of activity. Ther e-fore, even universities and colleges must work hard and in a goal-oriented manner, preferably in conjunction with other local institutions, to make the most of potential possibilities for creating change and renewal. This scenario naturally especially affects teacher -training institutes.

Changes in societal conditions caused by political, economic, technological or social forces and which contribute to the improvement of existing institutes are always important, even in the work environment. In Sweden a comprehensive survey (aimed at teachers in comprehensive/middle schools) shows that approximately 25% of all teachers have thought about changing careers due to health reasons (Jacobsson, 2000). The survey, carried out by the Central Agency for Statistics (*SCB*) includes 10,000 employees in Sweden and the results clearly show that out of all career groups, teachers most of all consider changing their profession or employer for health reasons. In one of the latest research contributions from the Department of Teacher Education, Åbo Akademi University, Treekrem (2000) shows several explicit examples of the consequences of changes in the work environment which are results of structural changes in society. Treekrem studies the psychosocial effects of long-term unemployment and the taking of long-term sick leave in a way that explains the psychosocial work environment pedagogical problems relevant to this application.

The work environment profoundly touches everybody's lives, but this occurs in many different ways, at different ages and in different businesses and branches. In school learning environments there is a long tradition of strongly focusing on pedagogy. This is especially important since the pedagogical learning environment comprises both children and adults and creates the actual basis for children's nurturing and learning. In this learning environment, children continuously create their "work environment". This occurs through games and other activities at day-care centers and preschools, through schoolwork and/or games at comprehensive/middle schools. Since the learning environment is simultaneously comprised of both the adults' (teachers and personnel) and student's work environments, teacher-training institutes are affected by the l earning environment in day -care centers as well as in compulsory/high schools and upper secondary schools. This applies both directly through teaching and indirectly through practical activities. Teacher education institutes are additionally affected by all the other conditions and prerequisites that apply to personnel and students. Furthermore, teacher education institutes also influence the learning environment indirectly via the national school system and its role as a formal national educational facility. Such influence is exercised via the offering of studies, choice of subjects, personnel policies, scientific ideals and the role of educators of young student teachers amongst other things.

During the past few years, the work environment has received more and more attention through the introduction of the concept *learning at work*. Ellström (1996) maintains that this attention had lead to a shift in paradigm, which in the context of policy making comes forth in many different ways; partially through an increased emphasis on (adult) learning rather than (adult) education, partially as a consequence of a loosening of the earlier so strict boundary between education and work life. This leads to a special emphasizing of "informal" learning, even outside the institutionalized educational system. In the Nordic Ministers' report (1995:3), the importance of a life-long learning in all work environments, independent of genre, is stressed. Nevertheless, life-long learning concerns not merely dedication to specific work skills; the concept also involves in at least equal quantities "...personal development, application of what we call 'soft' qualifications in the form of, amongst other things, creativity, the ability to learn new things, a comprehensive point of view and care of the entirety, quality consciousness, self-confidence, the ability to communicate and the ability to cooper-

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ate" (Ellström, 1996, p.143)*. There are several different reasons why decision makers, researchers and practicians ascribe great importance to thoughts of life-long learning at work; the economical ramifications are obvious. Development within large sections of the non-institutional work-place environment precisely represents consequences of technical and organizational changes, caused by changed conditions in the ruling societal forces. Studies made by Hirschhorn (1984); Adler (1992); Lennerlöf (1993); Brulin and Nilsson (1995) show that new concepts of production, seen throughout a 10-year period, constantly affect the work environment. This leads to the fact that the work environment in today's business world is characterized by increased complexity, widespread decentralization and a delegation of decision-making. Traditional briefing and directing disappears. Instead, new demands for multi-proficiency, increased independency and flexibility appear. Furthermore, the authors stress the demands that changes in competency have put on school education and even on the possibility of employees maintaining and developing actual competency in their daily work. Research by Gardell (1976) and Aronsson (1987) shows that a work environment that allows and stimulates learning and competency development is of fundamental importance for employees' health, well-being and personal development. According to Rubenson (1990); Treekrem (2000), possibilities for education at work also influence people's personal development as well as their tendency to engage themselves politically and participate in different types of idealistic work or adult education. Resnick (1987) speaks for a more distinct pedagogical consideration, with connection to the work environment, since research points out a number of differences between education at formal educational institutes and education in everyday life. Ellström (1996) warns against pronounced differences between education at educational institutes and education in everyday life. The consequences of such differences can be that only smaller portions of knowledge acquired at formal academic institutions becomes transferable and applicable as a base for practical actions in everyday life's work environment.

PROBLEM FOCUS

From a theoretical perspective of action, work and learning function together as two processes that are closely connected. Work as a concept can have different points of association, but a common way to interpret work is to contemplate the phenomenon, starting from the demands placed (technical, economical, functional, etc.) when a task needs to be done in a work environment. It is also common that the task is analyzed by management or management's superiors and that it consequently becomes translated into a *work-task* for a certain person within the frame-work of the work environment's prevailing structure and organization. Consequently, this process represents a traditional way of changing tasks into *work*. To gain knowledge of the actual work, however, demands a study of *what* a person actually does when he/she works. Additionally, in order to study the individual's application of his/her acquired competency, an observation of the individual's complicity and active participation in the activities' social and cultural community is needed.

From a theoretical perspective, *work* and *learning* are connected concepts, where *action* creates a central theoretical link. One theory of work, in which there exists an intention to say something about a work process and its demands on an individual, presupposes therefore a basic theory of human action in the same manner that theories of learning presuppose certain basic skills. Knowledge of human action includes, amongst other things, *how* cognitive, emotional and social assumptions are created, maintained and changed. Collins (1981); von Cranach and Harré (1982); von Wright; Suchman (1987), as well as Lauvås and Handal (1993) presume some form of action or experience as it pertains to human action and learning. Ellström (1996, p. 147) expresses the common-denominator type of learning as "relatively last-

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ing changes in an individual's competency as a result of the individual's interaction with his/her surroundings"*. Ellström claims that this definition can be generalized to include learning on a group level as well as on an organizational level. As far as actual learning is concerned, Marton (1992) states that learning can be studied through the learner's experiences. Consequently, to investigate learning implies studying *what it means to experience something.*

Within the field of classic learning psychology, the question of *what* an individual learns infers behavioral changes (internal or external). Modern cognitive learning theory expands this concept and speaks in terms of learning as a changing of the individual's expectations, knowledge ("mental models") or intellectual proficiency. Naturally, both perspectives can be criticized. Within the field of classic learning psychology, one disregards the accumulation of knowledge and other mental processes that lie beneath observed effects of learning on a behavioral level. Cognitive psychology mainly focuses on information processes. By doing so, the direct connection to the individual's actions during the acquisition of knowledge goes missing.

While this project continues to discuss the external and internal work environments, these expressions should in no manner be confused with the educational-psychological concepts "internal" or "external" behavior. What the *external work environment* in this project describes is the physical environment that people experience through work and learning in their work lives. This work and learning environment consequently creates a physical base, to which individual's establish relatively enduring cognitive, emotional and social relationships. In this way the external work environment constitutes a necessary base so that individuals, through work and learning, can establish a link to the *internal work environment*, in which their competence and qualifications can be shaped and developed through new experiences. The theoretical and practical actions are united in the individual's own consciousness through the relationship between the external and internal work environments.

The problems that exist in conjunction with different careers, i.e. the nurturing and education personnel receive in their professional life, is directly comparable to the pedagogy that formal educational environments are made to implement through their offering of studies. The common demand of all learning environments is that all acting individuals in institutions and organizations must learn how to administer and renew their own work environment in a beneficial manner. The employees as well as the employers must strive after bettering the external work environment's quality. With such a perspective, in terms of change, the pedagogical link to the work environment becomes very clear. Branching out from this, *work environment pedagogy* consequently becomes a discipline that, according to the aforementioned definition, affects the majority of areas in a person's work environment (even in children's play environments, which are considered children's "work" environments). The internal work environment has no boundaries, since it is constituted and exists in people's experiences and expectations of the external work environment. Boundaries are only created by the individual's worldview and mental scope. This manner of interpreting the concept *internal work environment* makes clear the mutual dependency between the external and internal work environments, as well as the relationship between them.

DEFINITION AND GOALS

It is in light of the aforementioned research areas that work environment pedagogy shall be studied in this project. The WEP-Project at the Department of Teacher Education will encompass pedagogical studies of the external as well as the internal work and education environments. Studies planned at the work environment pedagogical research center can contribute to new knowledge, pertaining to both understanding and realizing the pedagogical principles that affect the dynamics of society's work e nvironment. Newly qualified teachers can, ther e-

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fore, through the establishment and furthering of new knowledge, act as intermediaries of these insights (through their work in Finnish pre-schools, comprehensive/middle schools and other learning environments).

There is a long list of varied presuppositions about the work environment that all express relevant aspects of work environment pedagogy. In Finland, the calling of attention to work environment pedagogical research is just in its initial stages. Therefore, for the moment, research tradition is absent from the specific field of *work environment pedagogy*. Nevertheless, the significance of the pairing of the concepts *work* and *work environment* has always been a dynamic phenomenon. Even Finland as a nation has experienced this, perhaps especially during the past few decades of quick and varied technological, social and communicative changes. Such changes mean that the work environment changes character, often quite quickly. The consequences of this are always that the study programs linked to the newly emerging professions within the work environment crave adjustment. The Unit of Ostrobothnia, Åbo Akademi University, has during a relatively long period of time educated all types of teachers. Despite this, a scientific work environment pedagogy analysis standard that would be well suited for the diagnosing and evaluation of strategic educational problems from a pedagogical standpoint (with reference to a future work environment) is missing. A research grant from the Academy of Finland could give the institute the possibility to economically and competently work with scientific queries that, in the long run, can become an important part of work environment pedagogy research foundations in Finland. Additionally, this will lead to a positive development in teacher training in Finland, since it can reasonably be assumed that work environment pedagogy will leave a mark on Finnish research during the coming years. It is the goal of the research group that Åbo Akademi University shall be in the forefront of research to be realized.

The project's main goal is to establish a center for work environment pedagogy research efforts in Finland. Therefore, the component projects reflect both breadth and depth in their research concentration. Through the component projects, the institute's newly established research center will give considerable mome n-tum to the development and intensification of national and international involvement. This will, amongst other things, encompass the establishment of an internal and external research network. The result of financial assistance from the Academy of Finland for the realization of the component projects would be that the institutes' younger researchers, lecturers and teachers could receive relevant chances to develop their competency and r e-search experience through work within the research project. The component projects also present a possibility for the institute's graduate students to establish contacts with an actual research environment. This could further stimulate prospective teachers' research interests, while at the same time providing students with the possibility of carrying out whole or partial thesis work in conjunction with the ongoing research programs.

The research group also expects to contribute to the improvement of teachers' research skills at the Unit of Ostrobothnia, Åbo Akademi University, with the help of the component projects' research results. Additionally, all of the component projects would be able to provide the Faculty of Education, Åbo Akademi University, with important economic contributions combined with the effects of further educating personnel. Such contributions pertain mainly to the Faculty's academic propagation in the form of new doctoral, licentiate and master's dissertations. These contributions should even lead to a noticeably increased quality in the Faculty of Education's younger teachers, lecturers, researches and students.

PRESENTED PROBLEMS AND RESEARCH PROJECTION

The content of this research is defined with the help of the component projects. Notwithstanding, and more sp e-cifically, the research group distinguishes at least three complete research strategies that should be taking into account:

(a) Examination of the internal (or mental) work environment results in **new knowledge** of and understanding for *variation* in the individual's way of experiencing the work environment.

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(b) Investigation of the *meaning of variation* constitutes **relevant methods of description** in regards to people's experiences of the structure and content of activities relating to the external work environment (as seen in a social and cultural context).

(c) Evaluation of the meaning of the variation that exists in people's *experience of the external work environment* at different points of time during a period of change shows **how the individual is fostered and learns** in a work environment.

Through approaching the research problems in different ways, the research group expects to have good chances for discovering and understanding the essence of an individual's varied ways of experiencing and relating to the work environment. Additionally, studies of pedagogical intervention programs with specific concentration on and adaptations for determined environments make it possible to study the effects of changes in the work environment.

The WEP-Project consists of eight component projects (see following sections). All of the results of the component projects, individually as well as collectively, will create an arena for a national and international theoretical discussion surrounding the development of important contributions from work environment pedagogical research. Furthermore, seen in the context of quick alterations in society, and as a result of the continual need for improvement even in formal education, the results will represent new tools for conceptualization for people on different levels and in different positions. These tools will create a base for the increased understanding of individual's experiences of the work environment as well as the consequences of societal changes. In this manner, the WEPP constitutes a chance to critically evaluate educational contributions and make well-informed decisions with regards to educational programs that affect the work environment for all categories of people in the future. Every year, decisions regarding education influence thousands of parents, children, students, pensioners and professionals. Through the WEP-Project's research, the level of professionalism within teacher training as well as in schools and work life in general will be raised.

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METHODOLOGY CONSIDERATION

THE PREVALENT VIEW OF KNOWLEDGE

The research questions that will be answered through the various component projects must naturally be considered in the ontological and epistemological spheres that mirror the research phenomena's characteristics and knowledge's character. Such a sphere contains further questions, such as: What are the essential significations of the reality that is to be studied? What are the prevalent views of knowledge (in relation to the aforementioned problems)? In the well-known Max Schelerian spirit, and with help fr om phenomenology, knowledge-sociology has traditionally been able to convey a certain importance over questions regarding the relationship between knowledge, ideology and society. Differing from a normal nomotetical approach (based on "team relations"), Scheler's ideas emanate from quantitatively different typologies where knowledge and social formations are concerned. He argues that knowledge and society *mutually* involve one another (Bengtsson, 1989). This is in clear opposition to two of the most common conceptions of the relationship between knowledge and society, namely that, on the one hand, knowledge is completely determined by social circumstances and, on the other hand, knowledge is not at all affected by social conditions. Even if Scheler is thought by the majority to be the founder of modern knowledge-sociology, there are others, such as Luckman (1978) who do not see the relatio n-ship between knowledge and society as a simple, causal relation. Instead, Luckman accounts for large amounts of varied *interlacing* between knowledge and social reality. Accordingly, there is a tendency to apportion everyday knowledge greater importance than other knowledge -socio-logical areas (where scientific knowledge tends to stand center stage). Alfred Schütz has greatly contributed to the break -through of everyday knowledge within the field of sociology. He proportionately structures the ordinary world in a *surrounding world* that is actually within distance for individuals and a *parallel world* that is potentially within distance. Individuals in the su r-rounding world find themselves in a direct *we-relationship* to other people. This means that individuals stand face-to-face with one another and experience the other directly. For people that find themselves in the parallel world, individuals only have indirect relationships. Time as a concept is important. At the same time that the su r-rounding world is characterized by contemporaneousness, the parallel world is structured with the help of time in a *before-world* of predecessors, a *now-world* of contemporaries and an *after-world* of successors (Thomason, 1982). Schütz's objective realism, however, means that he (with the ordinary world as an objective) takes into account *a great number of spiritual worlds* that cross over into every day reality. One speaks of a dream and fantasy world, theatre and art world, play world, ecstasy and the science of extraordinary realities and activities. Compared to all of these realities, the everyday world nevertheless constitutes a superior or sover eign reality, characterized by the fact that individuals in full consciousness work and perform actions in it (Bengtsson, 1989).

What is perhaps most interesting in Schütz's earlier knowledge -sociology, as seen from the WEP-Project's perspective, is the interaction reflected between dialectic materialism and classic German objective idealism. Accordingly, Schütz proceeds from the assumption that people's consciousness develops in the interaction with materialistic reality, even if he recognizes that reality is of a conceptual, mental or spiritual nature: that it exists as ideal images and supersedes ordinary reality. Schütz also maintains the ordinary world as an objective, and through practical life -experience he maintains that people compose a base of kno wledge – an *everyday knowledge* – that in future experiences works as an interpretation diagram, from which individuals perceive and understand the world. Consequently, the world has general and repeatable characteristics and due to this, individuals are familiar with it.

THE PHENOMENOGRAPHIC APPROACH

According to Schütz's theories, social science must ultimately base its knowledge on an interpretation of people's understandings of the world, their motives for taking action, etc. This, in many respects, is in accordance with the phenomenographic viewpoint. Phenomenography represents a research effort that came forth from a project at Gothenburg University in the early 1970s. The primary goal of that project is to understand university level learning. The term "phenomenography" was chosen in order to spread the thought that it is possible to describe different phenomena as they appear to individuals by, for example, describing conceptions of different phenomena, instead of forming general principles for describing how they appear to the individual (Marton, 1992). The experience of *something*, as according to Schütz's phenomenology, is comparable to Marton's phenomenography. In both cases the

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reader can very well imagine that this "something" represents the focused problem. At the same time it is also very easy to imagine different situations where that "something" may appear. For example, it is possible to imagine a problem on the one hand and the individual's different manners of understanding or experiencing the problem on the other. Therefore, it can be considered plausible to think that the problem is independent of the individual, or independent of different ways of understanding it. The object (the problem) and the individual (the subject) then constitute two separate units. According to Schütz, the person who learns receives information about an object through his/her senses and creates an image of that object. Experiences or conceptions are just such images that create the subjective world, which more or less remain well situated in the objective world. Studies of how a problem is experienced or perceived imply studies of the problem itself as it appears in the individual's consciousness.

To answer the question "What does it mean to experience?" entails a dualistic ontologic base, where the object and subject are separate. According to the non-dualistic approach of phenomenography, the subject and object are not separated. Rather, how the subject experiences the object constitutes a relationship between the two. According to Marton, for example, there is "no problem in and of itself". A problem is always experienced by someone in a certain way and has (therefore) no independent existence. In phenomenography's non-dualistic perspective, two worlds do not exist, there is not a real objective world separated from a subjective world of images. Marton stresses that there is only one world, a real, existing world that people experience and understand in different ways. This world is both simultaneously objective and subjective. To experience something implies a relationship between object and subject, which encompasses them both. Experience is as much an aspect of the object as the subject. To study how relationships between the external and internal work environments vary in people's conceptions of work's structure and content implies studying *how the subject* (the individual) *experiences the object* (the relationship between the external and internal work environments). Since the world is both objective and subjective simultaneously, this is the same thing as studying *how the object manifests itself to the subject.*

The methodology used for the WEP component projects is mainly founded in the view of reality reflected in phenomenographical ontology. The prominent view of knowledge is based on empiricism, in which it is accepted that the foundation for knowledge is the experiences based on the observations of the senses. Additionally, the prominent social constructionistic view of knowledge applies, in accordance with theses from Dewey (1938); Lewin (1951); Piaget (1970) and Kolb (1984), that certain objects (for example, the relationship between the external and internal work environment) only exist when individuals construct them in their consciousness. For additional descriptions of the component project's procedures for data collection, please refer to the particular project.

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PRESENTATION OF COMPONENT PROJECTS

Component project A:

Title: PERSONNEL'S EXPERIENCES OF THE UNIVERSITY ENVIRONMENT

Principal researcher: Arvid Treekrem, Department of Teacher Education, Faculty of Education, Åbo Akademi University
Project leader: Arvid Treekrem, Department of Teacher Education, Faculty of Education, Åbo Akademi University

People's health reflects the condition of society and the rate of ill-health clearly documents a nation's ability to maintain a desirable welfare system as ill-health gives an account of the members of society. On the individual level, private finances as well as physical and social well -being influence an individual's health and ability to work. Additionally, experiences of well-being make apparent citizens' ability to master their lives (Treekrem, 2000).

There is a lot of research that shows that an individual's motivation is controlled by the needs that occur in life. Success in a work environment is determined by just how a person experiences these needs through their own contributions (Ekman, 1992; Arns, 1992; Futeral, 1993; Jeffmar, 1995; Ahlroos, 1999). Unfortunately there is also a flipside to this. The mass media reports daily on burnout and dissatisfaction with one's work environment. A Swedish investigation, carried out by the *SCB*, shows that more than one out of four teachers at comprehensive/middle schools are seriously considering leaving their jobs due to health reasons, even if only three percent actually go through with the process (Jacobsson, 2000). The problem often turns out to be that motivation has become too high and exceeded an upper boundary in one's own work relation. Symptoms of stress, such as lack of sleep and sleeping disorders, are often the results of an exceeded motivational level. This leads to the individual existing in a lethargic condition, where the presence of bodily pain is normal. The tiredness that follows this condition is a common symptom that can hinder. Emotional tiredness always involves a decreased desire to work and the consequences of this are a reinforced internal emotional resistance, a decreased need for experience and there within, decreased motivation (Finer, 1984; Skoog, 1988).

The purpose of the study is to investigate different aspects of individuals' experiences of the external work environment, partially from the university personnel's perspectives and partially from the students' perspectives. Central questions for this descriptive component project are:

- What are working conditions like, as perceived by the personnel?
- How do the university personnel characterize their work situations?
- What sort of attitudes to and what kind of feelings for work do the personnel express?
- What kinds of suggestions for measures to be taken and desires for improvement do the personnel express?

The collection of data is intended to take place with the help of questionnaires containing both "open-ended" and "yes/no" questions. Furthermore, the questionnaire answers will be complemented with in-depth interviews.

The purpose of the study is to try and identify variations and patterns in the personnel and students' perceptions and experiences of the university work environment. It is expected that through this study it will be possible to distinguish conditions important to the individual's well-being and good health. The results are expected to increase knowledge and consciousness of the university personnel's and student's daily work environment. Since the university work environment is also of na-

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tional concern, such knowledge builds an important base for discussions around the aforementioned enviro n-ment's continued development. It is expected that the research will lead to new research pertaining to work environment pedagogy and psychosocial questions of various forms at universities in Finland.

Component project B:

Title: THE VOICE – A RESOURCE IN THE EDUCATIONAL WORK ENVIRONMENT

Principal researcher: Arvid Treekrem, Department of Teacher Education, Faculty of Education, Åbo Akademi University
Project leader: Ann-Christin Furu, Department of Teacher Education, Faculty of Education, Åbo Akademi University

The voice is one of a teacher's most important tools. Vocal problems are a common reason for inability to work amongst full-time and part-time teachers as well as pre-school teachers. In addition to the fact that vocal problems often have deep negative psychological and social consequences on the individual level and negative pedagogical-didactic percussions on the professional level, it also simultaneously causes economic losses for society. Vocal problems occur much more often amongst teachers than among other professionals (Morton & Watson, 1998; Smith &. al, 1997; Fritzell, 1996; Pekkarinen & al, 1992) and the occurrence of vocal problems is noticeably high amongst student teachers. It is therefore especially important in teacher-training education to call attention to the importance of the voice as a tool. During training, the clinical as well as the communicative and esthetical aspects of voice-usage should be given attention. Considering the limited educational resources that exist, it is especially in the greater interest to adapt and form training so that it can provide a maximum educational effect.

The purpose of the study is to investigate student teachers' experiences of education in conjunction with a course on using the voice as a tool. Some central questions that deal with the students' experiences before, during and after the course are:

- What are the students' attitudes, from both before and after the course, towards the course ("The voice as a tool")? How do the students' feel that their attitudes affect the content of the course? What consequences does the course have on the students' experiences of education?
- What are the students' perceptions of their own voice usage? How does the students' consciousness of this influence their engagement in the course?
- What need for knowledge about using the voice as a tool do the students' themselves have when the course starts and, respectively, when it ends? How does the students' awareness of their own need for knowledge change from the point in time when the course starts to when it ends?
- How is the course teaching experienced, what feelings are called forth, what thoughts occur and what skills are developed by the students?
- How do the students describe and analyze their own learning processes and development in regards to voice awareness, knowledge and skills in using the voice as a tool?

By studying the course participants' experiences, this component project can increase knowledge of the conditions that favor the students' motivation for and involvement in the course. Additionally, studies of variation in the study results both before and after the course will give a clear indication of what effects the course presumably has had on the students.

The study will be carried out as an evaluation of the course "The voice as a tool" for a group of twenty perspective subject-oriented teachers. The course is worth one study week and includes, amongst other things, twenty hours of supervised teaching. The course also includes lectures as well as exercises in small groups, individual voice analysis and video analysis of interaction during a mock teaching session. The educational process will be documented with the help of an assignment. This assignment includes a "learning" logbook, reflections on literature used, written observations as well as a written analysis of videotaped teaching sessions. The thought is that the assignment shall be part of the eva luation and thus provide a base for a qualitative study of the st udents' experiences of learning. The assignment is complemented by a questionnaire as well as an in-depth interview containing specific questions.

It is expected that teachers, building upon the results of this study, can improve the usage of the voice as a pedagogical resource. This can occur by making the course more effective (based on the students' experiences), through increased knowledge of the cognitive as well as the emotional and skill-related aspects of voice usage. Consequently, an increased awareness of the voice as a pedagogic-didactic resource can, in the long run and with the help of this study, even contribute to reducing the occurrence of voice problems in both teachers and student teachers.

Component project C:

Title: FOSTERING AND LEARNING POSSIBILITIES IN THE KITCHEN'S WORK ENVIRONMENT. An educational evaluation study of the home economics course for students in grade 7.

Principal researcher: Arvid Treekrem, Department of Teacher Education, Faculty of Education, Åbo Akademi University
Project leader: Gun Åbacka, Department of Teacher Education, Faculty of Education, Åbo Akademi University

The development of the kitchen as a concept has a very long history. Ruins provide evidence that fire has been important since the beginning of humankind and archaeology shows that the discovery of fire is an important breakthrough for the growth of human civilization. After a period of time, fire became important for the development of kitchens and houses (mainly concerning the shape and equipping) and additionally in conjunction with the establishment of modern settlements. During the development of human life on earth we suspect that, historically speaking, the kitchen as a concept was formed quite early and it has throughout time shown itself to represent an important work environment in known settlements. Notwithstanding, the kitchen in the modern sense of the word – a separate room for the preparation of food – first emerges during the late middle ages and mainly in the upper classes. It is only during the 20th century that the kitchen is equipped with modern conveniences. Hearths become pits, which turn into wood burning fires and finally become electric stoves (Edgren & Törnblom, 1993; *Jägare blir bönder*, 1994; Lagerkvist & Åberg, 1994; Pantzar, 2000).

It is specific to the 21st century that the make up of a family changes in tact with other societal changes. Even parents' eating habits in the work environment and children's eating habits in the school environment are changing. Parents admit that relevant knowledge concerning children's experiences of kitchens and households is missing from the "modern home" at the beginning of the 21st century. To determine how relevant the curriculum is for the children that take "home economics" (for students in grade 7), new research is needed that can give knowledge of students' own experiences of their kitchens at home. Additionally, it is urgent that someone studies the effects of instruction and learning in comprehensive/middle school (in the case of this study, grade 7). Consequently, the study's research is comprised of the following questions:

1. What experiences of kitchen household-work do students carry with them from their own growth environment?
2. How does the kitchen work environment affect children's desires, interest and ability to manage to complete tasks and duties in the school demonstration kitchen?
3. What are the effects of the learning process that can be distinguished after the completion of obligatory instruction in home economics for students in grade 7?

The study is carried out amongst students in grade 7 at the *Övningsskolan* in Vaasa, Finland. The effects of the learning process that can be distinguished after the completed program demand a pedagogical evaluation. A classic method for doing this is to establish a test group and a control group (Cook and Campbell, 1979). Therefore, the study is carried out in accordance with this, starting with a preliminary collection of data that encompasses students entering grade 7 (T_1 = autumn term 2001). Later, final data is collected when the students complete grade 7 (T_2 = spring term 2002). This makes possible a comparison of the results of T_1 and T_2. Finally, the results of the test group are compared to results from the control group, in order to study if eventual effects are caused by instruction or by coincidence and suchlike.

The results of the study are presumed to be able to stimulate parents and teachers to discuss the content of instruction in the area of home economics in comprehensive/middle school. Such discussions can lead to a more up-to-date attitude towards comprehensive/middle schools' future curriculum. In this manner, the study can even support the development of students' qualifications in home economics.

Component project D:

Title: TEACHERS' PROFESSIONAL DEVELOPMENT. A study of primary school teachers' conceptions of their competence in information and communication technology (ICT) in small schools in rural areas of Swedish-speaking Finland.

Principal researcher: Arvid Treekrem, Department of Teacher Education, Faculty of Education, Åbo Akademi University

Project leader: Gunilla Karlberg, Department of Teacher Education, Faculty of Education, Åbo Akademi University

The aim of the Finnish national strategy "Education, Training and Research in the Information Society" (Ministry of Education 1999) is that Finland, by the year 2004, will be one of the leading knowledge and interaction societies. Equal opportunities for citizens to study and develop their own knowledge are stressed. During the last few years, large economic investments have been made in the technical (computer) infrastructure of schools. A c-cording to the Ministry's strategy, teachers play a key role in the educational development of schools and the utilization of new technology. In order to determine the future development needs of teacher training, the OPEPRO-project was launched by the Finnish National Board of Education (Luukkanen, 1999). Finland is one of the most sparsely populated countries in Europe, which entails that there are many small, rural schools (Havén, 1999). The national curriculum for 1994 and educational laws give municipalities more rights to make their own decisions, but also more economic responsibility. Schools have received an increased freedom in crea t-ing their own pedagogical profile. Teachers working in sparsely populated areas are, proportionate ly speaking, alone in their responsibilities, with little contact with fellow colleagues (Kalaoja, 1990). Measures to economize have resulted in school closures, teacher lay-offs and reduced resources for the in- service training of teachers. Daily life in the information society does not always meet the high expectations and goals set in development programs and strategies (Piipari, 1998). Finland can be called "a laboratory of the information society" (Buchberger, 1999; Luukkanen, 2000). The learning environments of small Swedish- speaking schools in Finland are an uninvestigated area, where comprehensive and in-depth qualitative research is needed.

The aim of this research project is to analyze the rural teachers' needs, their motivation for and possibilities to increase their ICT competency as well as analyze how the national policies fulfill rural teachers and schools' needs by:

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a) Identifying rural teachers' perceptions of their ICT competency
b) Analyzing national policies in regards to teacher competence and ICT in small rural schools
c) Qualitatively analyzing the authorities' strategies in comparison to teachers' conceptions.

The study will be based upon interviews with rural teachers in Swedish -speaking Finland and the results can give important knowledge about how teachers in rural schools experience their work environment, as well as the needs and possibilities they feel that ICT creates in the context of a small school. Additionally, it is expected that the results will be of importance to the furtherance of class teachers' professional development, in small schools as well as in larger schools. The focus of the research also gives support to class teachers in rural schools, in respect to their difficult work situation. Since schools in the sparsely populated areas of Finland are of national interest, the results of this research constitute an important base for discussions of this work environments' continued development in Swedish-speaking Finland.

Component project E:

Title: ENTERPRISE EDUCATION – FOR PERSONAL AND SOCIETAL DEVELOPMENT?

Principal researcher: Arvid Treekrem, Department of Teacher Education, Faculty of Education, Åbo Akademi University
Project leader: Bettina Backström-Widjeskog, Department of Teacher Education, Faculty of Education, Åbo Akademi University

Enterprise education has received more and more attention since its implementation in the Finnish curriculum in 1994 (Ggl-94). It aims to draw forth people's internal need for activity, initiative and creative enterprise (Backström-Widjeskog, Kuisti & Hansén, 1999). Already by the end of the 1980s, attention was being called to the problems that the evolution of society brings about in the educational system. It was noted that the primary core of enterprise education dealt with central qualifications for tomorrow's work force. These qualifications are, for example, creativity, flexibility, the ability to take initiative and the ability to take responsibility and to solve problems: qualifications that are not primarily achieved through a mere changing of traditional educational content, but which instead demand an entirely different approach to educational work methods and processes (CERI, 1989). The most important part of today's educational ideology is not the preparation of young people for a life-long career within a chosen field, but instead the life-long process of education. The world changes four times faster than the school system; how can this factor be taken into account?

The research tasks include a study based upon interviews within the upper secondary/high school's educative activities and psychosocial work environment. Firstly, the study will focus on teachers' ideas regarding education, teaching, the students' need for development and the aspiration for competency connected to enterprise education and active-student learning. Secondly, the teachers' experiences, conceptions and attitudes towards relative aspects of the phenomenon enterprise education will be analyzed and interpreted. The goal is to survey teachers' attitudes towards enterprise education and active -student learning. Enterprise education and it's role in the curriculum will be analyzed, to the extent to which didactical methods and pedagogical forms are considered to support initiative and active-student learning. The main issues are:

- What skills do teachers expect from students?
- How do teachers intend to suit education to fit the demands of working life?
- How do teachers try to prepare students to deal with the future work environment?
- What kind of attitudes do teachers have towards enterprise education?

The results of the study are expected to give support to the development of strategies for how schools and society can work together in order to enrich and better their own activities as well as favor students' needs for development and aims for competency. The knowledge of enter-

prise education from the study could be partially used in regional development (as pertains to future job market demands) and partially to foster psychosocial work environments and to support students' entrepreneurial characteristics, initiative taking and life-long learning. From a curricular perspective, the results of the study are expected to form an important base (in respect to a critical examination of enterprise education) that can be of great importance in future curriculum reforms in comprehensive/middle schools.

Component project F:

Title: UNIVERSITY TEACHERS' KNOWLEDGE OF, ATTITUDES TOWARDS AND VISIONS OF EDUCATIONAL USE OF INFORMATION AND COMMUNICATION TECHNOLOGY (*UKAVIKT*)

Principal researcher: Arvid Treekrem, Department of Teacher Education, Faculty of Education, Åbo Akademi University

Project leader: Tommy Strandvall, Department of Teacher Education, Faculty of Education, Åbo Akademi University

According to the Ministry of Education's strategic document "Education, Training and Research in the Information Society. A National Strategy for 2000-2004" Finland will be a society of knowledge and interactions, belonging to the best in the world, by the year 2004. Use of information and communication technology (ICT) is especially emphasized in the pedagogical work environment; it is there that a transition to an open learning environment where teachers' ICT proficiencies are important occurs. In order that this concept can be realized, personnel in the field of education should receive a more supportive base (and continuing) education in the field of ICT.

During 2001 at Åbo Akademi University, a course worth six study weeks is being offered in higher education, in which 32 personnel from the university will participate. The course will include an ICT education portion, where the goal is to develop the personnel's ICT pedagogical skills. This portion of the course is the object of the research project.

The intention of the project is to:

- Investigate university teachers' attitudes towards and knowledge of the pedagogical use of ICT.
- Investigate university teachers' visions of the future's virtual university and the virtual pedagogical work environment
- Evaluate if the method used in the offered course is effective (in respect to educating teaching personnel in ICT pedagogy)

The research group consists of a group (most likely 32 people) that completes the course in higher education offered at Åbo Akademi University 2001. Additionally, a control group of 15 people not participating in the course will be taken into consideration. The study will start with a preliminary investigation, where the teachers' skills and expectations are analyzed. The research and control groups will be interviewed immediately before the course starts. The course, which takes place spring and autumn terms of 2001, consists of individual guidance (6 hours per person) as well as studies and collaboration in a virtual learning environment. After the completion of the course, a new series of interviews will take place. The results from both investigations will then be compared, analyzed and evaluated.

The results of the research are expected to give a clear picture of university personnel's attitudes towards the educational use of ICT plus what skills they may have in the area, as well as how they perceive the virtual work environment and future universities. The study

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presumes to provide important information that can be used by universities when they instruct their teaching personnel in ICT in the future and when universities plan to develop a virtual university work environment.

Component project G:

Title: SOCIAL LEARNING – TODDLER'S COMMUNICATION AND ACTION STRATEGIES IN THE LEARNING ENVIRONMENT

Principal researcher: Arvid Treekrem, Department of Teacher Education, Faculty of Education, Åbo Akademi University
Project leader: Marina Lundkvist, Department of Early Childhood Education, Åbo Akademi University

According to Stern (1991), a child's personality is built through interaction and cooperation with other people in his/her surroundings. Stern means that the force behind a child's development is that child's aspiration for contact and that from the first moment, children are social creatures born into the social world that he/she is surrounded by. Piaget (1973) sees socialization as being two separate processes, depending on whether it pertains to the relationship between two children (child/child) or between a child and an adult (child/adult). The process child/child occurs on an even playing field, where the child is forced to maintain a distinction between his/her own ego and the other child's ego. Sommer (1997, p. 84) emphasizes something he calls "togetherness" competency. With this he means a person's "...ability to be both part of a relationship with others and to take into consideration their perspectives and wishes and at the same time accentuate one's self as a person, i.e. to have both a 'social understanding' and the ability to, as an individual, leave an impression in social situations". How children develop this so-named togetherness competency can be studied in numerous situations. In order for a child to understand how he/she learns, he/she needs time, space and possibilities to investigate, reflect and try new things in different situations (GFL 1996, p. 14). Children themselves develop different methods and strategies for gaining knowledge and information about their surroundings. The adult's responsibility is to participate and arrange a favorable learning environment, where the child is stimulated to curiosity, investigation, experimentation, problem solving and reflection. The basis for life-long learning is already put into place in pre-school. Even one's attitude towards learning and work habits are established early, and therefore it is important that educators constantly reflect over their own relation to children and learning and over the work environment's possibilities and meaning for children in pre-school (SOU 1997:157).

What meaning do we then impart unto the concept of a work environment? Work environment pedagogues speak of an internal mental work environment as well as an external physical one. Studies of the internal work environment strive to describe and analyze, amongst other things, how people create their own internal environment in their consciousness and how this expresses itself in the form of people's experiences, perceptions and conceptions of the different phenomena they meet in the world around them (Treekrem 2000a,b). The external environment comprises the environment that an individual meets in connection with his/her work, etc. (in this case, the environment that children meet in pre-school). Through the concept "work environment", one can even understand work and the work place's effects on people's health and personal development. This can have to do with how physical, technical, organizational, social, cognitive and affective factors in the work environment influence and protect people's well-being and work satisfaction. Additionally, the educational environment that children find themselves in receives a purpose at the same time

that it can challenge or become an obstacle to learning. This approach to space and environment indicates an outlook where children's learning does not only take place inside the head as a mental process but also exists in constant interaction between the individual and environment. According to this, *the environment constitutes not just good or less good conditions for learning – but instead also actually decides learning's content and process* (Bengtsson, 1998; Nordin Hultman, 1998).

The purpose of the study is to investigate toddlers' communication strategies in interactions with other individuals in pre-school work and learning environments. Furthermore, the study will analyze in what ways toddlers' communication can lead to different action strategies, as well as what challenges toddlers experience in their work environment. The collection of data will occur through a series of video taped observations of toddlers between the ages of 1-3 in pre-school during an approximately two year period of time.

The results are expected to assist in making clear the idea of "competent children", as well as making clear the phenomena that are applicable to a pre-school teacher's work environment. The study's results are also expected to contribute to an increase in teacher competency amongst those who work with the youngest children at pre-schools. It is additionally expected that the study will lead to political discussions in municipalities regarding the future development of children and teachers' mental and physical health in the work environment.

Component project H:

Title: THE UNIVERSITY, THE REGION AND THE WORK ENVIRONMENT. A study of universities' descriptions of the external work environment

Project leader: Jan Sjöberg, Department of Teacher Education, Faculty of Education, Åbo Akademi University

Universities' role in regional development is much discussed if one relates the question at issue to a traditional center – periphery discussion. Proponents for central universities will gladly dismiss smaller universities' importance for the development of society. If one looks at current societal evolution in Finland, every university town has developed into a growth center. In this respect, universities are of direct determining consequence for a region's development. Within the framework of work environment pedagogical research, the overall question at issue is: *to determine how universities themselves describe the work environment that their study programs relate to.*

This component project will analyze scientific and vocational colleges with thought given to the development potential that they have in relation to the development of the job market. More precise questions are as follows:

1. How is working life perceived at universities?
2. How do work representatives perceive universities and colleges?
3. What regional and profession oriented profiles do the different universities have?

These general questions are made more precise in the following:

1. How do universities further regions' spiritual and material growth?
2. What expectations (external and internal) are placed on universities?
3. What is perceived as quality in respect to regional development?
4. How can universities address the changes taking place in working life?
5. Which lines of study should be prioritized?
6. How can universities widen the foundation for industrial enterprises?

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7. How can universities promote professionalism and employment?

The research will give a picture of the ability for action that potentially exists within the different universities. The research results will also be able to show which strategies should be developed in order to realize concrete change in the work environment, on both regional and local levels.

The study should also indicate which areas of concentration universities should be able to develop and if the job market can support them. Thus the primary investigation is characterized by the mapping of needs and possibilities that exist (concealed) in the Vaasa area and are, in certain respects, future-oriented.

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TIMETABLE

The WEPP will continue over two, three-year periods of time. The first period of research begins in January, 2002 and finishes in December, 2004. The second period of research begins in January, 2005 and finishes in December, 2007. The WEP-Project will be carried out in accordance with the following timetable for the first three-year period of research:

Year 1 (2002)

Pilot project and data collection during the spring and autumn terms, 2001, as well as spring term, 2002, for all component projects save component project H (component project H will begin autumn term, 2002).

Year 2 (2003)

Transcription of interviews, coding of data, statistical calculations, analysis and interpretation of qualitative data will be carried out during the spring and autumn terms, 2002 as well as spring term, 2003. Preliminary results will be presented in the spring term, 2003. As concerns component project H, data collection continues during the entire spring term, 2003.

Year 3 (2004)

Analysis completed during autumn term, 2003. Doctor's, Licentiate's and Master's dissertations and degrees as well as reports for the publication of results will be composed autumn term, 2003 and spring term, 2004 (to the extent that the work is complete). Report from component project H will be composed during 2004.

ETHICAL CONCERNS OF THE WEP-PROJECT

Oral permission has been given and, additionally, written permission will be applied for from all headmasters or other responsible parties at the schools/universities/other institutions where data will be collected. Furthermore, the WEP-Project will obtain permission from teachers as well as students and other concerned parties before observations, video or sound recordings, interviews or questionnaires are instigated and/or carried out. In the cases where it is applicable, project leaders will ask for written permission for the purpose of publicly reporting findings.

Data will be collected as unobtrusively as possible. All data will be processed confidentially and measures will be taken to protect the identities of individuals studied. Complete anonymity will be granted in all publications to protect the identity of those studied.

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PERSONNEL RESOURCES

PRESENTATION OF THE RESEARCH GROUP

A project group consisting of researchers, research students and research assists that work within different departments of the Faculty of Education, Åbo Akademi University, will execute the WEPP. The group is comprised of the following individuals, in numerical order (with title, position, project status, area of responsibility:

1) Furu, Ann-Christin, PhM, registered speech therapist
   Teacher in verbal communication, Department of Teacher Education, Åbo Akademi University. Doctoral candidate, leader of component project **B**.

2) Åbacka, Gun, MEd
   Teacher of didactic Home economics, Department of Teacher Education, Åbo Akademi University. Doctoral candidate, leader of component project **C**.

3) Karlberg, Gunilla, MEd
   Primary school teacher, headmaster (on leave of absence). Doctoral candidate, leader of component project **D**.

4) Backström-Widjeskog, Bettina, MEd
   Assistant, Department of Teacher Education, Åbo Akademi University. Doctoral candidate, leader of component project **E**.

5) Strandvall, Tommy, MEd
   Teacher of IT didactic, The Higher University Education Venture of Åbo Akademi University (until further notice), employed as Assistant in pedagogy by the Department of Teacher Education, Åbo Akademi University. Doctoral candidate, leader of component project **F**

6) Lundkvist, Marina, MEd
   Assistant, Department of Early Childhood Education, Åbo Akademi University. Doctoral candidate, responsible for component project **G**.

7) Sjöberg, Jan, Lic.Ed.
   Assistant in pedagogy, Department of Teacher Education, Åbo Akademi University. Doctoral candidate, leader of component project **H**.

8) Treekrem, Arvid, PhD, University lecturer (senior researcher)
   University lecturer in *college- and university pedagogy*, Department of Teacher Education, Åbo Akademi University. Leader of Åbo Akademi University's Higher University Education Venture. Research leader, responsible for the **WEP-Project**.

The majority of component projects included in the WEPP have a close association to the work and research areas the leaders of the various component groups have been involved in during the last few years and encompass the different aforementioned aspects of work environment pedagogy.

EDUCATION, WORK EXPERIENCE AND INTEREST

The head of the research project, Doctor of Philosophy Arvid Treekrem (PhD) has a long and broad experience of the work environment, having once been employed as an engineer,

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economist and professional educator. He has been active both as a works engineer and as executive technical director within private industry as well as a project leader and consultant within public administration in Norway. Furthermore, during a ten-year period of time, he has researched and instructed in the subject of *personal work's meaning and methods* (PIM) at Gothenburg University, Sweden. Dr. Treekrem has worked with both large and small research projects and for the former Chancellorship in Stockholm, where he assessed the *Linguistic Research Training Programme in Sweden*, 1995-1996. That project included the investigation of different variables in work and study environments, etc., with connections to all of the professors, doctoral candidates and research advisors' services. The study even included investigating the research students' study situation, in which five Swedish universities participated. In addition to this, Dr. Treekrem has studied the psychosocial work environment in an extensive collaboration project between *AMI, AMU* and a local doctor's office in Sweden. The project was directed at studying the long-term unemployed and people on long-term sick leave, with the purpose of reintegrating them into the work environment. He concluded the project with his doctoral dissertation *Recapturing ordinary life – a pedagogical study of a psychosocial rehabilitation programme for persons who are long-term unemployed and on long-term sick leave.* Furthermore, Dr. Treekrem has studied the effects that leaves of absence have had on the work environment during the early 1990s in the Gothenburg (Sweden) region, as perceived by the employment office and the employers. The results have been published at a previous NFPF-conference.

Project leader Gunilla Karlberg, Master's of Education, is a primary school teacher. She graduated from the Faculty of Education in Vaasa in 1993. She has worked for 6 years as a teacher in the Turku archipelago, of which 5 years as a teacher and headmaster in a small school. In addition to her employment, Mrs. Karlberg has participated in a comprehensive educational study and has held several positions of trust in the local community. She has taken a leave of absence from work (starting in the autumn of 1999) in order that she may study and perform research fulltime. Her interest for research was sparked during her time as a teacher. In 1999 Mrs. Karlberg was awarded an EU grant for participation in a Comenius course for European village school teachers. The course showed that there is a great need for research on schools in sparsely populated areas, both in Finland and abroad.

Doctoral candidate Tommy Strandvall, Master's of Education, has during the past few years held several courses pertaining to ICT (information and communication technology) at Åbo Akademi University. He has also worked as a part-time assistant with the IT pedagogy project at the Department of Teacher Education and researched the educational usage of ICT for his master's thesis. Mr. Strandvall has even worked as the editor of the book *"Utbilda via Internet. Handbok i IT-pedagogik"* (Educate through the Internet: a handbook for IT pedagogy) (Nyberg & Strandvall, 2000). He works and researches together with his advisor, Professor Rainer Nyberg. Mr. Strandvall's chosen field of research deals with university teachers' attitudes towards, skills in and visions of the pedagogical usage of ICT.

Doctoral candidate Gun Åbacka, Master's of Education, is a teacher in home economics. Since 1996, the Faculty of Education, Åbo Akademi University, has employed her as a lecturer in home economics. Her main task since joining the faculty has been to initiate the first ever subject-oriented teacher educational program in home economics for Swedish-speaking Finns (which became an academic subject in 1999). While in the capacity of program leader, she realized that there was an enormous need for research within the field of home economics. Ms. Åbacka also has teaching experience on both the compulsory/middle school and vocational school levels. Her interest in researching children's experience of the kitchen as a work environment has been piqued by her work experiences in compul-

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sory/middle school and by the academic environment at the Department of Teacher Education. Ms. Åbacka already enjoys a wide network of contacts (spread throughout all of the Nordic countries) within her chosen field.

Doctoral candidate Bettina Backström-Widjeskog, Master's of Education, graduated from the program for administration, planning and research within the Faculty of Education, Åbo Akademi University. She received the first Matti A. Sainio prize in education in 1997 for her master's thesis, entitled "Integrated education in comprehensive school". Ms. Backström-Widjeskog has worked as a research assistant at the Department of Teacher Education since autumn, 1998. She has been responsible for pedagogical courses on the university level and has herself lead courses within the framework of the Open University. She and two other authors published in the autumn of 1999 a research publication dealing with enterprise education and has, in conjunction with Professor Sven-Erik Hansén, composed an article dealing with comparative curriculum research (which will be published shortly by a foreign publisher, Peter Lang). She is involved in an international network and has participated in conferences in Switzerland, the U.S.A. and Scotland. She has completed the theoretical course (40 credit points) included in post-graduate studies. Mrs. Backström-Widjeskog's field of research deals with enterprise education and active-student learning.

Project leader Ann-Christin Furu, Master's of Philosophy and accredited speech therapist, graduated from the Logopedic education program at Helsinki University in 1998. She also studied to be a music therapist at the Sibelius Academy, graduating in 1995. From 1995-1998, Ms. Furu was employed as a speech therapist and has, since 1998, additionally worked as a lecturer. In addition to her work as lecturer in verbal communication and logopedics at the Unit of Ostrobothnia, Åbo Akademi University, she works as a speech therapist at the Students' Health Foundation in Vaasa and as a freelance lecturer. Parallel with these undertakings, she has been studying pedagogy since 1999. Due to her enormous interest in voice usage, Ms. Furu has, in many ways, involved herself in preventative "voice-care" work.

Project leader, doctoral candidate and assistant Marina Lundkvist, Master's of Education, graduated from the Faculty of Education, Åbo Akademi University in 1993. Since the summer of 1998, she has been enrolled as a research student at the Faculty of Education. Her licentiate thesis will shortly be finished and she will receive her Licentiate of Education degree during the autumn of 2001. Her thesis deals with questions pertaining to pre-school teachers' motivation, interest and possibilities for using computers with children in a pre-school. Through this study, the importance of a well planned and interest awakening learning and work environment needed for work with children has clearly come forth. Mrs. Lundkvist will continue her research studies, focusing on the youngest children's work and learning environments at pre-school. She has recently completed two doctoral-level courses, "The new view of children" at Gothenburg University in Sweden and "Childhood and family research in the post-modern society" at Roskilde University in Denmark. Both courses are important for and relevant to Mrs. Lundkvist's continued research work and the areas she researches in.

Project leader Jan Sjöberg, Licentiate of Education, graduated from the Faculty of Education, Åbo Akademi University in 1998. Mr. Sjöberg has a lot of experience of institute work in the Department of Education as well as in the Department for Teacher Education, where he now works as an head assistant (at times in research). He has a relatively comprehensive academic publishing career behind him and has commission of trust at Åbo Akademi University. Mr. Sjöberg intends to dispute his doctoral thesis during the autumn of 2001. He will participate in the WEP-Project with his research starting from the year 2003.

NATIONAL AND INTERNATIONAL NETWORKS

For certain WEPP component projects, contacts with researchers both in Finland and abroad have already been established.

For component project **A (Personnel's experiences of the university environment)** contact has already been established with Prof. Claes-Göran Wenestam, PhD, at the *Insitutionen för pedagogic och didaktik*, Gothenburg University. Prof. Wenestam is interested in a collaborative project concerning work protection studies of the psychosocial work environment. This network will be widened to include studies of the psychosocial work environment in Norway.

For component project **B (The voice – a resource in the educational work environment)** the researchers will conduct studies of the students' experiences of learning in conjunction with the study of "the voice as a tool". In connection with this project, contact has been established with Leena Rantala, PhD at the *Kognitiivinen laboratorio, Kliininen neurofysiologia*, Oulo University Hospital and Jaana Sellman, PhD at the *Insitutionen för Fonetik*, Helsinki University. Collaboration within the Nordic countries is additionally being discussed with Johan Sundberg, PhD at the KTH Voice Research Centre, the Royal Technical College in Stockholm, Sweden and Elisabeth Sederholm, MD at the *Enheten för logopedi, Institut för kliniska vetenskaper*, Umeå University, Sweden.

For component project **C (Fostering and learning possibilities in the kitchen's work environment)** contact has already been established with PD Päivi Palojoki, at the *Kotitalous- ja käsityötieteiden laitos*, Helsinki University, and with Associate Professor Helena Shanahan, PhD, at the *Institutionen för hushållsvetenskap*, Gothenburg University. Collaboration is additionally being discussed with Prof. Hanna Christiansen in Norway and Prof. Jette Benn in Denmark.

For component project **D (Teachers' professional development: a study of primary school teachers' conceptions of their competence in information and communication technology (ICT) in small schools in rural areas of Swedish-speaking Finland)**, contact has already been established with Mr. Henrik Laurén, expert at the National Board of Education, Mr. Esko Kalaoja, professor at the University of Oulu and with Mrs. Maria Villanueva, professor at the Faculty of Education, *Universitat Autonoma* of Barcelona, Spain. The Comenius network is establishing a wide international network of contacts for teachers and teacher educators: "The Small Schools of Europe" (www: smallschool.jyu.fi/default.htm).

For component project **E (Enterprise education – for personal and societal development?)** contact has already been established with Gene Luczkiw, PhD, The Institute for Enterprise Education, Torold, Ontario, Canada, V.P. JoAnne Akerboom, Centre for Entrepreneurship, Education and Development, Halifax, Nova Scotia, Canada and with Nancy L. Hutchinson, Faculty of Education, Queen's University, Kingston, Ontario, Canada. Additional contacts have been made with Director Brian Twiddle, PhD, National Centre: Education for Work and Enterprise, University of Strathclyde, Glasgow, Scotland, Jarle Sjøvoll, PhD, *Høgskolan i Bodø*, Norway, Dr. Ron Mahieu, Umeå University, Sweden and Prof. Volker Kraft, PhD, *Fachhochschole Neubrandenburg Germany, Fachbereich, Soziale Arbeit,* Gesundheit, Germany.

For component project **G (Social learning – toddler's communication and action strategies in the work environment)** contact has already been established with Prof. Ingrid Pramling Samuelsson, Prof. Jan Bengtsson as well as senior lecturer Mikael Alexandersson, all employed at the *Institutionen för pedagogik och didaktik*, Gothenburg University, Sweden. In England, contact has been established with Prof. John Siraj-Blatchford, Cambridge University and Iram Siraj-Blatchford, London University.

EXPECTED OUTCOMES

The purpose of the WEP-Project is to define and describe healthy manners in which to conduct one's self in the work environment, from a pedagogical perspective and emanating from different angles of approach and bases in relation to people's experiences and knowledge. The research appears to be extremely well founded for Finland, since individuals' psychosocial experiences of the work environment have, until just recently, been taken for granted and treated as non-problematic phenomena.

Firstly, results of the project are expected to make important contributions to the theoretical discussion surrounding the influential factors that appear to affect people's encouragement of good health in the form of raised abilities to cope with life in the changeable psychosocial environment. The results should be of special interest as far as the work environment of various instructional institutions in Finland are concerned, but can even lead to the raising of critical thoughts and the spreading of discussion to other countries. Secondly, the research results, as seen in the light of the work environment's rapid development towards the demand for increasingly higher effectiveness and performance, are expected to work as a "compass" for people in various situations. Everyone needs to be able to more critically evaluate his/her own work in regards to qualitatively perceived decision-making (designed to promote good health) regarding the value of life-long learning and increased abilities for coping with life (for individuals in the current and future work environments). This includes government ministries, elected representatives on different levels, educational institutes' administration and leaders, headmasters, educational leaders, teachers, students and parents.

Expressed in more concrete terms, the WEPP (with the financial assistance of the Academy of Finland and other sources) will hopefully produce six doctoral dissertations, as well as at least one monograph and two research reports. The results will be presented in the form of presentations (academic and non) at conferences in Finland and abroad (please see previous sections). Furthermore, scientific articles will be published in international periodicals. Additionally, a joint monograph will be prepared and published as a theme issue in a scientific periodical (*Journal of Nordic Educational Research*). Lastly, a yearly seminar will be arranged for all those interested in work environment pedagogical research.

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Continuing Vocational Training in Belgium : an overview

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In 1993, the European Union set up a research which aimed to shed a light on the different aspects of training within European countries. Using a standardized questionnaire, the results allowed to compare the vocational training of all participating countries. Today, this study is continued in about the same countries as in 1993. This paper gives an overview of the continuing vocational training in Belgian companies over the past 7 years, using both the results of the 1993 survey and today's survey. The findings suggest that all companies increasingly invest in both formal and informal learning, no matter which sector they belong to or how many employees they have. Still, mid-sized service companies are the highest investors in training. Moreover, it seemed that company size is one of the key factors determining if training is handled in a strategic way. Implications for future training management and policymaking are discussed.

INTRODUCTION

Continuing vocational training is a topic that gets ever increasing attention from both governments and managers for different reasons. A tight labor market forces managers to look for alternative solutions in order to attract and retain the employees needed. One of these solutions is investing in continuing employee education. The life long learning debate is taking place on all levels of society and with different actors, which underlines the attention that is being paid to the topic (Baert, Van Damme, Kusters & Scheeren, 2000; European Commission, 1996; OECD, 1999; UNESCO, 1996). Education doesn't stop after graduation from high school or college. Elements such as fast technological evolutions and the complexity and speed of communication and information, ask for a permanent l earning process. Moreover, knowledge and learning capacity often serve as a competitive advantage for companies.

Trying to get a picture of the efforts companies make to invest in continuing vocational training, is a logic consequence of this need for more permanent education and the development of a learning attitude (e.g. de Brier, 1990; de Brier & Meuleman, 1996; Frazis, Herz & Horrigan, 1995; Sels, Bollens, Buyens & Vanhoven, 2000; Van Assche, 1990; Van de Poele, 1996; Vandenbossche & Buyens, 1999) Governmental policymaking and companies' training management can only be effective if one knows what training in companies looks like today. From this consideration, the European Union and Eurostat started in 1993 the FORCE research, which aimed to shed a light on the training efforts of companies throughout Europe (de Brier & Meuleman., 1996). The results of this study allowed to compare European countries on their companies' training efforts. Due to the fact that the need for lifelong learning is today even stronger than it was in the early 90's, the EU decided to continue this

research. As a result today's results not only allow to make a new comparison between the training efforts of European companies, but also allow to view the evolution of training over the last decade. As a part of this research project, this paper presents some important preliminary Belgian results and the evolution of continuing vocational training in Belgium over the past years.

METHOD

questionnaire

As in 1993, a standardized questionnaire was used in every participating country. This questionnaire was constructed after several meetings with delegates from the participating countries, so that it would be representative for all countries. Because of small differences between countries, some questions were adapted to the Belgian situation and the questionnaire was translated into two national languages, Dutch and French. Clear definitions of all concepts used in the questionnaire were given, thus making it possible to translate without changing the questions' content.

The questionnaire contained different parts. A first part asked for more global organizational characteristics, such as the number of employees, the global cost of wages etc. and global training characteristics (use of training plan, budget, competency management etc.). The following part looked more into detail to the company's formal and informal training. Participants in training, number of hours spent on different training topics, costs of training, training providers and others were questioned. At the end, the link with the company's human resources management was questioned. In this part, special attention was paid to the way companies deal with young graduates. The reference year for all questions (unless specified otherwise), was 1999.

Sample

The sample was representative for Belgian companies with more than 10 employees. It was set up using three criteria : company size (based on number of employees), activity (based on NACE codes) and region (the Dutch speaking region, the French speaking region and Brussels). Depending on their number of employees, companies were divided in 6 groups : < 19 employees, 20-49, 50-199, 200-499, 500-999, >1000 employees. The 58 NACE codes that were used, were divided in 30 groups. Following NACE codes were used : 10 -11, 13-37, 40-41, 45, 50-52, 55, 60-67, 70-74, 90-93. As a result, a 6x30 sample design was used for every region.

Procedure

Data were collected using different methods. First, companies were contacted in order to inform them about the purpose and content of the questionnaire. Some basic questions were asked in order to find out if the company had set up some training in 1999 and which kind of training it was. Depending on the answers, additional data were collected using a different approach. When a company declared that no training was provided during the past year, some basic questions were asked by phone. When the company set up very little training or only informal training, the questionnaire was sent by post, followed by extensive telephone follow-up. In case the company had made considerable investments in formal training, data were collected by means of a face-to-face interview.

The overall response rate was 52 %, but it should be mentioned that the response rate for the face-to-face interviews was much higher than that from the postal sendings. The results discussed in this paper are based on the response of the first 389 companies who responded to the questionnaire.

RESULTS

Provision of training

An increasing number of companies provided training in 1999. In 1993 only 46,1 % of the participating companies invested in any kind of training, whereas in 1999 this percentage amounted to 80,2 % (Table 1). T his increase is likely to pursue in the coming years, because 87,5 % declared that in 2001, their training efforts would increase or at least stay the same. Looking at the size of those companies providing training, it appears that especially companies with more than 200 employees invested in training. Companies with less than 200 employees also provided more training in 1999 than in 1993, but not as much as companies with over 200 employees.

Table 1
Companies providing or not providing training in 1999, according to company size (%).

	No training in 1999	Training in 1999
1 (<19)	47.5 %	52.5 %
2(20-49)	39.5 %	60.5 %
3 (50-199)	5.6 %	94.4 %
4 (200-499)	0 %	100 %
5 (500-999)	0 %	100 %
6 (>1000)	0 %	100 %
Total	19.8 %	80.2 %

Sector differences

Looking at the company's activity, it seems that service companies pay relatively more attention to vocational training than those from other sectors. The sectors 'electricity, gas and water', 'financial intermediation', 'real estate, renting and business activities' and 'transport, storage and communication' count the highest number of companies that invested in training. Manufacturers of textiles, leather and shoes, construction companies, manufacturers of pulp and paper products and publishers and printing companies are among the lowest investors.

Reasons for not organizing training

In order to be able to convince the so called 'non believers', or those companies that don't invest in continuing vocational training, an investigation of the reasons for not investing is necessary. As a result, this research also questioned these non-believers. It seems that the reasons for not investing in training, are still the same as in 1993. The most important reasons for not setting up any vocational training in 1999 are that employees already possess the needed competencies (87 %), or that the company invested in recruiting employees with the needed competencies (60 %). A third important reason is a lack of time for permanent education (58 %) : employees who are in training, are not 'productive' and the operational flow doesn't stop. Problems in detecting training needs was also assumed to be one of the reasons for not investing in vocational training, but companies clearly stated that this was not the case.

Types of training

The questionnaire clearly made a difference between 'the more formal continuing vocational training courses (CVT courses)' and 'the more informal, other forms of vocational training.
CVT courses are courses that were designed and man aged by the enterprise itself (managed internally) or by organizations not part of the enterprise (managed externally).
Other forms of continuing vocational training are :

- planned periods of training, instruction or practical experience, using the normal tools of work, either at the immediate place of work or in the work situation
- planned learning through job rotation, exchanges or secondments
- attendance at learning/quality circles
- self learning through open and distance learning
- instruction at conferences, workshops, lectures and seminars at which the purpose of the employees attending the event is to learn/receive training.

Due to the overall increase in the use of vocational training, there is also an increase in use of all other kinds of training (Table 2).

Table 2
Use of different kinds of training in 1993 and 1999, by companies who invested in training (%).

	1993	1999
CVT courses managed internally	91,1	52
CVT courses managed externally		69
On the job training	66,5	71
Job rotation	/	40,5
Learning/quality circles	39,6	36,5
Self learning	26,5	33
Instruction at conferences, workshops etc.	61,1	71

However, when looking at company size, it is striking that the mid sized companies (200- 499 employees) made more use of CVT courses, whereas SME's opted for the other forms of training. The bigger companies (500->1000 employees) clearly used a mix of training methods. These companies also report dealing with training in a more structured and planned way, using training plans, budgets, evaluations and competency management.

Looking at company activity, there seem to be some differences between sectors. Although CVT courses and on the job training are important training methods in all sectors, both are more frequently used by service companies than non-service companies. The least used training methods are learning/quality circles and self learning through e -learning and distance learning. Surprisingly, the latter is the least used in service companies and the most used in wholesale companies.

As can be seen in figure 1, this time was mostly spent on training in personal skills and development, followed by accounting and finance. The least training time was spent on general office work.

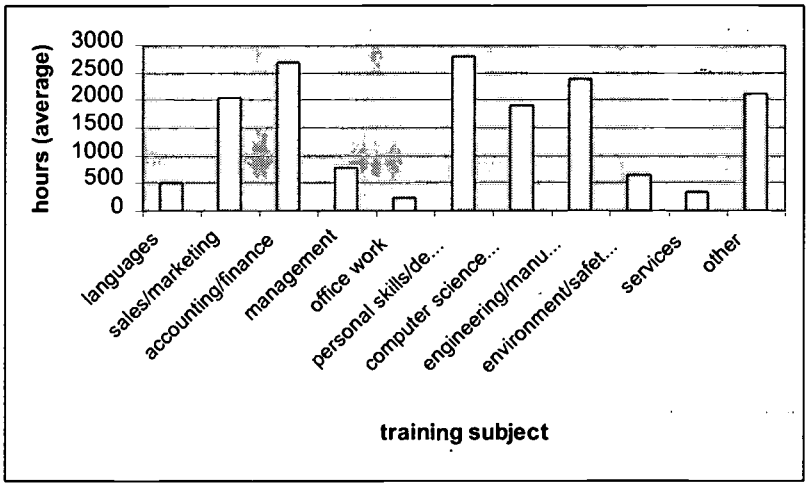

Figure 1. Average number of hours spent on different training subjects.

Embeddedness of training

How do companies deal with continuing vocational training ? Is training used as an ad hoc instrument or is it treated as a strategic element and thus taken care of in a more structured pro active way ? Our results show that there has been a considerable evolution in the treatment of training in a more strategic and structured way. In 1993, only 26,3 % of the participating companies used a training plan. In 1999, this amounted to 60 %. The most important reason for this increase is the fact that training is more and more seen as a matter of permanent discussion between management and employees. Another important reason for using a training plan is to obtain commitment of management at all levels to the importance of vocational training or to make continuing vocational training programs better known throughout the organization. Companies do not invest in setting up a training plan in order to obtain financial assistance from the EU or other external sources such a s sector funds.
It is important to know why the remaining 40 % made no use of a training plan in 1999. There doesn't seem to be 'one good reason', however companies clearly stated that continuing vocational training is not the responsibility of individual employees which they should undertake in their own time, but the responsibility of the company.

In agreement with the 60 % who provided a training plan in 1999, 61,8 % also provided a training budget (versus 26,1 % in 1993) and 62,8 % is linking training with competence management through assessing future manpower skills, training needs and expected changes (versus 30,4 % in 1993). The higher percentage in 1999 doesn't mean that attention is being paid to training needs and skill analyses of all employees. The survey shows that only 40 % of these companies use a skill and job assessment for each employee. Company size seems to be a more decisive factor in determining why some companies treat training in a more structured way than company activity : the more employees a company counted, the more they planned, budgeted an analyzed training needs.

The 60/40 division that was found for the variables planning, budgeting an competency management, was not found when looking at the use of evaluation crit eria and an evaluation instrument for training outcomes : 51,4 % of participating companies evaluated the training effects. These companies are mostly service companies. Evaluation of training effects on the level of changes in behavior, attitudes or organizational outcomes is very scarce in comparison with evaluations on the level of participant's satisfaction. Although difficulties in obtaining valid and reliable evaluation results and the fact that a profound evaluation is time consuming are important reasons for not evaluating training, companies state that evaluation of training outcomes just does not have high priority.

Since vocational training is inextricably bound up with human resou rces management, the questionnaire also looked at the link between these two and the way in which companies deal with young recruits and graduates.

To make sure that enough graduates can be hired, lots of companies contact colleges and universities, both as a part of a human resource marketing strategy and in order to know the best graduates in advance. The methods used for this purpose are diverse, but still campus recruitment is the most used, followed by the more traditional postal mailings.

On the average, companies are satisfied with graduates' qualifications. As a result, 47,6 % declares that graduates possess enough skills to start working at their company, 28,9 % thinks that this is sometimes the case and 23,5 % declares that graduates don't have the right skills at all. The three most important reasons for this lack of needed skills are the fact that schools put too little job practice in their programs and doesn't teach the skills one needs in a company, nor a work attitude. Moreover, companies reported that these shortcomings already cause problems today (37,4 %) or will cause problems in the future (14,8 %). But still almost half of the participating companies stated that these shortcomings wouldn't cause any problems at all (47,8 %).

The questionnaire also contained questions about the way vocational training is managed and the integration of human resources management and vocational training (figure 2). The results show that most companies treat vocational training in a pro active w ay . These findings are in line with the previous mentioned findings that most companies deal with training in a more structured way, using plans, budgets and skills and training needs analyses. Moreover, this is also in line with the fact that a majorit y of the participating companies states that training is totally (50,3 %) or partially (27 %) integrated in the human resources management.

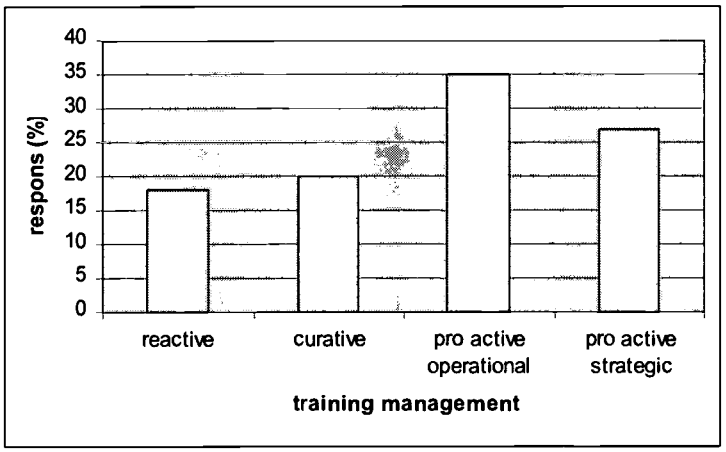

Figure 2. Different ways of managing training.[1]

CONCLUSION

[1] Reactive : training is used as a 'fire extinguisher' : when it is too late and problems already arose, training is used to solve them.
Curative : training is not used when it is in fact too late, but it is used ad hoc. There's no vision about continuing vocational training or no real training management
Pro active operational : there is a vision and real training management. Training is important but not a strategic issue.
Pro active strategic : there is a vision an d real training management. Training is a strategic issue.

This study has attempted to give a broad outline of the way continuing vocational training in Belgian companies has been managed over the past 6 years. On the one hand training clearly got more in the spotlights in 1999 and there is a considerable increase in the number of companies that invest in vocational training (Frazis et al., 1995; OECD, 1999; Sauter, 1997; Sels et al., 2000; Symoens, 1992; Van de Poele, 1996; Vandenbossche & Buyens, 1999). Moreover, these investments are more often managed in a structured and pro active way. On the other hand, company size is still one of the main factors determining if attention is being paid to continuous training (de Brier & Meuleman, 1996; Frazis et al., 1995; Sauter, 1997; Symoens, 1992; Van de Poele, 1996; Verdonck, 2000). Moreover, although training is more often used as a pro active tool, it's still not so often managed on a strategic level (Bergenhenegouwen, 1998; Goldstein & Gilliam, 1990; Sels et al., 2000, Van den Broeck, 1990; Vandenbossche & Buyens, 1999).

Today more than 75 % of Belgian companies engage in some sort of continuing vocational training, which is a considerable increase in comparison with 1993. But still these companies are not equally distributed between all kinds of sectors and sizes. The smaller the company, the more unlikely that there is time for education and training. These 'non believers' often declare that they just don't need any training because their employees already possess all the needed skills. Earlier research has shown that there is a clear link between the investments in continuous training and the use of certain well known human resources good-practices (Sels et al., 2000; Vandenbossche & Buyens, 1999). So if a company never assesses or evaluates employees' training needs or needed skills, the conclusion that all needed skills and competencies are present, may be a distorted conclusion that might lead to future problems. Another reason why (smaller) companies don't invest in training, is a lack of time. For a small company, the manpower problem is even more pressing : sending some staff to a training course, may mean that half of the staff is not at work and half of the work can't be done. This study, just as most others (Sels et al., 2000; de Brier et al., 1996), paid special attention to different aspects of the more formal, classical forms of training, such as CVT courses. This might be a reason why the percentage of smaller companies that doesn't invest in training, might be distorted. As this study shows, training in these companies is more often done in an informal and thus less visible way through on the job training, job rotation and knowledge sharing. Moreover, together with an increasing interest in continuous education, there's an overall increase in the use of these other training forms. So one can expect that an even more frequent use of these training forms may be expected in the future, thus giving a solution for the time and manpower problem. Future research should give us more insight in this matter.

Not only more companies invested in training in 1999, this was also more done in a structured and strategic way. An increasing number of companies analyses competencies, skills and training needs, sets up training using a plan and a budget, integrates training in the human resources management and uses training in a pro active, but still operational way. Although these results are promising, it's surprising that only a number of companies try to evaluate training effects and transfer on the level of employee behavior, attitudes or company outcomes. Although evaluations on these levels are hard to accomplish, they are a useful instrument for improving training quality and preventing wrong investments (Bernhard & Ingolis, 1988). More clarity on valid and reliable evaluation instruments might persuade more companies to start profound evaluations. This might lead to a greater focus on training quality and the strategic importance of continuous vocational education and training.

Due to the limited scope of this paper, only some important preliminary results could be discussed. In a next paper, the findings presented in this paper will be extended, looked at into more detail and be compared with results from the other European countries.

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Training incidence and job-mobility in Switzerland [1]

Stefan C. Wolter[2], Aarau and Berne

A. Introduction

According to human capital theory training can be separated into two categories: training of general skills and training of firm-specific skills. Becker (1964), one of the founders of human capital theory, argued that employers would be prepared to invest into firm-specific skills but not into general skills. Since then, but increasingly during the last decade, many empirical studies have shown that employers invest very often and substantially in general skills. Apart from empirical observations, different theories also led to a reconsideration of Becker's theory. Common to all of these theories is the claim that under specific circumstances firm paid or subsidised general training will not lead to a higher probability of voluntary job separations of the trained employees and that therefore the employers would not loose their return on their investment. As a contrast to the popularity of these extensions and reconsiderations of the model of Becker, there are not that many empirical studies trying to find out whether firm paid general training actually leads to higher turnover rates or not. The present study complements the few existing studies insofar as it covers the most recent time span and is applied to the whole employed population. Previous Swiss and German studies cover only the first half of the 90's, years that were (with regard to the business cycle) characterised by growing unemployment and declining rates of turnover. Studies in the United States focused mainly on young workers or special targeted training programs that are difficult to generalise to the whole population.

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B. The Human Capital Theory Assumptions

From the classical human capital theory's assumptions about training and turnover, we would expect that a firm-specific investment in an employee's human capital should reduce the incentive to search for a new job and the actual probability of separation.[3] At the same time, firm-specific investments should also reduce the probability that an employer dismisses the employee.

Contrary to firm-specific training, general investment in human capital that is transferable to other employers should increase search activities, as the assumed self-paid general training enhances the value of alternative wage offers relative to the wage paid by the current employer. In order to know about these alternatives, workers have to increase their search for new jobs. Under the assumption of an efficient labour market there should, however, be no impact on actual separations, as the current employer would raise the wage to equal the workers' outside opportunities. Finally, investment in general human capital should not affect the probability of dismissals since the employer, according to the theory, shares none of the costs or the benefits.

I. Firm-specific and general training

In theory, firm-specific and general training are defined according to their transferability to other employers. The definition therefore is related to the content of the training. In practice, this division is difficult to make and research shows that contrary to the theory, employers often finance, or participate in the financing of general training or that workers do not share the costs of firm-specific training (see e.g. Barron/Berger/Black 1998). Different theories try to explain this deviation from the predictions of the classical theory. The following list of papers is by no means exhaustive but gives a picture of the most cited theories:

- Katz/Ziderman (1990) explain deviations from the classical theory by information asymmetries between the current employer and a potential future employer regarding the value of general training of specific workers.

[3] Of course one could also look at the relationship between training and turnover from the opposite view. Royalty (1996) found evidence in the NLSY Data Set that the predicted turnover of a worker has an impact on the probability of receiving training. This potential inverse relationship is also the source for an endogeneity problem that will be addressed later.

- Acemoglu/Pischke (1999) emphasise the possibility that labour markets are imperfect, which is contrary to the human capital theory's assumptions. Non-competitive labour markets with compressed wage structures encourage firms to invest in general training. In the situation of a compressed labour market, the firm is ready to invest in the skills of its workers until the marginal profit of training equals the marginal cost of training. The possibility of paying wages that are below productivity turns general skills into *de facto* firm-specific skills (p. F120).
- Investments in general training could serve as a form of marketing in the process of recruitment (see e.g. Sadowski 1980). In a situation of imperfect information the employer tries to attract the best workers with a reputation of offering general training.
- Another explanation assumes that training always contains a non-separable mix of firm-specific and general elements and that investments in general training by employers must not lead to higher probabilities of separation. Following the arguments of Feuer/Glick/Desai (1987, p.122) the worker has no incentive to leave the company as long as the sum of his return on his specific training investment and his share of the returns from his general training is higher than the enhanced value of an alternative wage offer due to the transferable part of his training.
- In a new paper Kessler/Lülfesmann (2000) develop a theory of incentive complementarity between employer-sponsored general and job-specific training: the possibility to provide specific training leads the employer to invest in general human capital. This theory also leads to a number of implications already observed in the literature described above.

Contrary to the hypotheses of the classical human capital theory the effects of training on turnover are in these cases not so much determined by the content of training but best defined by the question whether the training is financed by the employer or not. Therefore in this study we differentiate between firm-subsidised and employee-funded training, disregarding whether the training is firm-specific or general in its content.

According to these theories we would expect, that any rational employer will subsidise the training of his workers only if search activities for better opportunities or voluntary separations of trained workers will not increase as a consequence of the provided training. Therefore we

expect no significant impact of firm subsidised training on *on-the-job* search activities and quits (*hypothesis 1*). In the case where training was provided in order to attract new workers and reduce potential turnover, employers would even expect a decreased interest of workers to look for outside opportunities and consequently lower turnover (*hypothesis 2*). Regarding firing of workers, we expect that any financial investment on the side of the employer goes to the most productive workers who he is most likely to keep, and therefore we should see a significantly lower number of these workers dismissed compared to workers who had not received firm-subsidised training (*hypothesis 3*).

With regard to employee-funded training activities, we still expect a positive impact on search effort (*hypothesis 4*). Whether there will be an increased number of actual job separations depends on the probability that the current employer will match higher outside offers. The ability and willingness of employers to improve the position of their current workers depends on many factors and we expect therefore that higher search activities will eventually also lead to a higher rate of voluntary job-separations (*hypothesis 5*). Firing, finally should not be affected by employee initiated and funded training activities (*hypothesis 6*).

II. The empirical literature

The most recent empirical literature can be divided into five different categories, depending on their treatment of the job-mobility variable:

- Especially researchers from the United States are more interested in the impacts of training on job stability and therefore treat separations from employers uniformly. One of the important reasons for not separating quits and dismissals is also that fact that it is difficult to distinguish the two possibilities in the data. Many of the studies (e.g. Lynch 1991 or Veum 1995, Parent 1999) concentrate on young people and initial training.
- European researchers (e.g. Backes-Gellner/Schmidtke 2000 or Zweimueller/Winter-Ebmer 2000) focus more on employers and separate turnover into two categories: voluntary (quits) and involuntary (dismissals).
- Only a few researchers (e.g. Royalty 1998) distinguish between job-to-job or job-to-non-job turnover. Royalty analysed the impacts of gender and differences in formal education on turnover but did not look at particular effects of job training on turnover.

- And finally, so far only Baenziger (1999) and Zweimueller/Winter-Ebmer (2000) differentiated between the impact of training on search behaviour and actual separations.
- Only a few studies (e.g. Dearden et al. 1997 for the U.K.) have tried to overcome the problems that arise from the possibility that in the mobility equation, unobserved determinants of mobility are correlated with the determinants of training (endogeneity). If this were the case, the estimates would be biased. A potential way two overcome these problems is by using simultaneous equations, matching techniques or instrumental variables (IV). The problem with the latter method is that results react very sensitively to the instruments selected.

Contrary to the German and Swiss studies, the American studies found little evidence for any significant effect of training on turnover. The U.K. study finds a reduction in the probability of a job-to-job move when applying the before-and-after approach. When using the IV approach or the simultaneous equation models, results tend to be less clear. The main shortcoming of the U.S. and the U.K. studies, however, is that turnover data does not distinguish between quits and layoffs.

D. The data and the model

I. The data

The data used in this study come from the Swiss Labour Force Survey (SLFS) and cover the years 1996 to 1999. The SLFS is an annual telephone survey with a sample of some 16'000 persons in the working age (15-65). The questions relate to the working life and the definitions follow ILO standards in order to produce internationally comparable data, in fact about 70% of all questions are comparable to the US Labor Force Survey. Since its first year in 1991, SLFS data has been widely used in labour economics by Swiss and foreign researchers (e.g. Winter-Ebmer/Zweimüller 1997). The SLFS is a rotating panel in which one-fifth of the people interviewed are dropped *randomly* and annually. The interviews take place in May and retrospective questions relate to the last 12 months. In the 1996 survey some 8,000 persons interviewed were dependent (not self-employed) workers. They were asked about their training

activities between t_{-1} (May 1995) and the date of the interview.[4] For the years following the interview we analysed the mobility of those people interviewed in 1996 and still in the sample in the year of interest. Due to the rotating character of the sample we lose some 2,000 observations every year as we move forward in time.

In our analyse we use the data set from 1996 to 1999. The data covers the part of the business cycle when economic growth was picking up again. The unemployment rate fell from above 5% to around 2.5% by 1999. Using 1996 as the starting year is also essential to our analysis because the survey in that year was accompanied by an extension to the normal survey, covering the topic of continuous education. While this gives us the opportunity to analyse training activities of workers in more detail, it led also to a reduction of the questions related to training in the subsequent years. Because of these limitations we have to adopt a different strategy than the panel approach used by Zweimueller/Winter-Ebmer (2000) in their study. This results in a lower number of observations, when the time period is extended beyond 1996.

II. The definition of firm-subsidised training

We use one specific definition of employer provided (*subsidised*) training in our study, although different definitions were tested. A glance at table 1 shows that training has at least two important components where the provision by firms or sharing between employers and employees matters.

Table 1
Training according to time and finance dimensions

	Time				
Financing	Employer	Employee	Both	Not working	Total in %
Employee	84	1259	1	33	37.08
Employer	1415	347	26	113	51.18
U.I.[5]	94	276	1	18	10.47
Others	22	1	20	4	1.27
Total in %	43.48	50.70	1.29	4.52	100

[4] Some researchers are concerned with the validity of self-reported data on training activities. Krueger and Rouse (1998) find significant differences between self-reported training activity and data sampled by employers. They assume that only the administrative data are correct and that the higher participation rate measured in the self-reported data are due to measurement errors. Barron/Berger/Blank (1997) have found a substantial measurement error in their data too, however, firms tended to report more training than employees. In their matched survey, however, there appears to be no systematic variation in reporting errors based on firm or worker characteristics, and aggregate reported measures of the incidence of training are similar.

[5] U.I. = Unemployment Insurance.

Many of the previous studies neglect the time dimension and the opportunity costs that go along with them. The self-reported reasons of those having not participated in adult education give a hint, to what extent the time factor might be important in training decisions. Some 44% stated the lack of time as a reason for non-participating in work-related training, whereas financial reasons were only stated by 14% and the lack of employer support by some 7% of the respondents. Although the cells where time[6] *and* financial resources both come from the employers or the employees are predominant, some of the arrangements show mixed sharing.
The definition used in this study is a very broad one and includes all training, where the employer participated either financially or with time. According to this definition 54.12 % of the training was subsidised by the employer and 45.9% was not.[7]

III. Types of Training

In the supplementary questionnaire in the 1996 survey, questions were asked about continuous education of workers. Besides questions about the financing of education, the providers (on-the-job or outside), the time spend in education, those participating in some form of continuous education were also asked about the type or content of training. Although workers were asked whether the type of training they had followed was work-related or not, it is not possible to determine whether the training was strictly general or firm specific.[8] The three most chosen categories of training were language courses, IT-training and management training in the group that was predominantly financed by employers. From the type of these courses we can deduce that their content is likely to be more general then firm specific. Training courses that were

[6] If employers provided time, the training took place during working time or the time spent in training was counted as overtime. This is regardless whether training takes actually place at the workplace or outside the company.
[7] Although our data allowed weighting participation by the number of hours spent in training, we only report results for the training incidence. The calculations presented are fairly robust to these alternative specifications, a result also reported by Krueger/Rouse (1998) in their study. Veum (1997) differentiated actual training hours and the training incidence and also finds that both specifications are fairly similar (p. 227). We also tested alternative specifications of the firm-subsidised and employee-funded variables and found results that were qualitatively similar to the ones reported here.
[8] The questionnaire is in this respect distinctively different from other known questionnaires on training. Some questionnaires used e.g. in northern European countries (e.g. Barth 1997), ask how long it takes to learn a job and how much of the skills learned on the job could be used with another employer. This kind of questions allows determining the degree of firm specific and general skills. On the other hand these questions are focused on the initial training and neglect the amount of *continuous* training it needs to perform a job well. The Swiss questionnaire covers the latter but does not ask specifically about the amount of training that would be transferable to a new employer.

predominantly employee-funded were either language courses or types of training with no direct relation to the current job.

IV. Who trains and who gets Training?

The training incidence of the adult population in Switzerland is, as the OECD (2000) points out in its thematic review on adult education, in the middle field of all OECD countries, although Switzerland has one of the highest levels of initial training[9] among the OECD countries. According to OECD statistics roughly 32% of the employed population participated in adult education at least once a year in the period of 1994 to 1998.[10]

We estimated participation logits for firm-subsidised and employee-funded training in a multinomial logit model in order to have the same reference group in both cases: a) that training is financed by employers and b) that training is funded by employees[11]. There are three possible outcomes ($y = 1, 2, 3$) with an unordered categorical property:

$$\textit{Training}_i = \begin{cases} 1 & \textit{if employee did not report training for 1996} \\ 2 & \textit{if training was subsidized by employer} \\ 3 & \textit{if training was funded by employee} \end{cases}$$

we use therefore the multinomial logit instead of e.g. an ordered probit model. We arbitrarily set "no training" $\beta^{(1)} = 0$ (base category), so that the remaining coefficients $\beta^{(2)}$ and $\beta^{(3)}$ measure the change relative to the $y = 1$ group. Setting $\beta^{(1)} = 0$, the equations become

$$\Pr(y = 1) = \frac{1}{1 + e^{x\beta^{(2)}} + e^{x\beta^{(3)}}} \quad (1)$$

$$\Pr(y = 2) = \frac{e^{x\beta^{(2)}}}{1 + e^{x\beta^{(2)}} + e^{x\beta^{(3)}}} \quad (2)$$

$$\Pr(y = 3) = \frac{e^{x\beta^{(3)}}}{1 + e^{x\beta^{(2)}} + e^{x\beta^{(3)}}} \quad (3)$$

[9] One of the highest levels of initial training means one of the lowest levels of people with no post-compulsory education.

[10] OECD uses - as in this paper - the Swiss Labour Force Survey as source of their information.

[11] We can observe that some individuals participated in more than one training course during 1996. But as in Backes-Gellner/Schmidtke (2000) we decided to take only the first course in those few cases when more than one course was reported.

Table 2
Multinomial logit estimation[12] of the determinants of training by type

Independent variables	Firm-subsidised		Employee-subsidised	
	Coef.	P>|z|	Coef.	P>|z|
Women	-0.03	0.689	**0.65**	0.000
Age	**0.08**	0.000	**0.05**	0.027
Age^2	**-0.12**	0.000	**-0.08**	0.004
Married	0.02	0.760	**-0.24**	0.002
Swiss Nationality	**0.53**	0.000	**0.38**	0.001
Education				
- University	**1.21**	0.000	**0.56**	0.001
- University of Applied Sciences	**1.64**	0.000	**0.83**	0.000
- A-levels	**0.89**	0.000	**0.84**	0.000
- Higher vocational training	**1.35**	0.000	**1.07**	0.000
- Apprenticeship	**0.79**	0.000	**0.52**	0.000
Industries				
- Manufacturing	0.03	0.931	0.12	0.721
- Hotel & Restaurants	**-1.16**	0.010	-0.24	0.546
- Construction	-0.40	0.206	0.10	0.779
- Retail Sales	0.05	0.878	0.14	0.685
- Communication	0.15	0.617	0.22	0.536
- IT	0.38	0.210	0.10	0.768
- Banking & Insurance	**0.93**	0.002	0.42	0.241
- Public Administration	**0.67**	0.029	0.34	0.349
- Education	**0.58**	0.063	**0.73**	0.041
- Health	**0.61**	0.043	0.36	0.288
- Other Services	-0.03	0.922	0.41	0.256
- Agriculture	0.24	0.623	0.30	0.562
Job characteristics				
- Top management	**0.63**	0.000	0.06	0.601
- Middle management	**0.42**	0.000	**0.22**	0.026
- Part-time worker	**-0.30**	0.002	0.09	0.316
- Tenure (*10)	**0.30**	0.001	0.00	0.997
- Tenure^2 (*1000)	**-0.32**	0.045	-0.10	0.459
Firm characteristics				
- Small firm (< 20 employees)	**-0.29**	0.001	**0.15**	0.089
- Large Firm (> 100 employees)	**0.33**	0.000	0.10	0.311
- Located in the Italian lang. R.	-0.28	0.155	-0.10	0.642
- Located in the French lang. r.	**-0.69**	0.000	-0.13	0.139
Number of observations	6458		6458	
Log likelihood	-5476.18		-5476.18	
Pseudo R^2	0.09		0.09	

Coefficients with bold characters are significant at least at the 10% level. The reference person is male, has no post compulsory education, is a blue collar worker working full time in the German speaking part of Switzerland, in the industry sector "others" in a company with 100<employees >20.

Our results in table 2 confirm in most parts the results of previous studies insofar as they find that firm-subsidised training goes mainly to the well-educated part of the workforce[13], working

[12] All regressions were run on Stata 6.

in large firms and already occupying a function in the management. Part-time working, foreign nationality or working in the less well paid sectors like hotels & restaurants and small firms reduces the probability of getting access to firm-subsidised training. Education plays the foremost important indicator for training, the *relative risk ratio* of receiving firm-subsidized training for employees with tertiary education lies between 3.3 and 5.8, where almost all other significant variables have values below 2. Looking at employee-funded training we see, that industry differences almost completely disappear (except for teachers), so do most other job- or firm-related characteristics. The positive, but small relationship between firm-subsidised training and tenure is inconsistent with the human capital theory, which predicts that all training should be concentrated at the start of the employment. The findings could also indicate that in Switzerland as in other countries having the Germanic type of apprenticeship training, a majority of general skills and occupational training is done during the apprenticeship and that this reduces the need for concentrated training at the start of employment.

Some findings indicate that employee-funded training serves partially as a compensating mechanism for those not getting any support from their employer. Women or employees of small firms who get significantly less access to firm-subsidised training are significantly more likely to train without support from their employers. Differentiation according to education shows, however, that those with a lower education (upper-secondary II level: apprenticeship and A-levels) and lower probability of receiving firm-subsidised training do not have higher coefficients when it comes to employee-funded training. Compensation according to educational levels does not seem to play an important role.

V. The Potential Problem of Endogeneity

We would think that employers are more likely to subsidise training of employees whom they expect to retain longer and also whom they expect to remain longer with their firm. Any test whether the provision of firm-subsidised training reduces the probability that the beneficiaries voluntarily quit the company suffers therefore problem that one cannot distinguish easily between the effect training has on the probability to leave and the selection of trainable workers by their employers. Theoretically an IV-approach could provide a solution but as stated earlier, the selection of a suitable IV is difficult and likely to distort the results rather then to improve

[13] The same holds for most European countries see e.g. Brunello (2001).

them. Our data did not offer such potential IV's[14]; therefore we used a more classical and simple approach to the problem. We estimated first the probability to receive firm-subsidised training in a multinomial logit equation and then used the same variables in the turnover equation. Thereby we control for the observable selection of trainable workers in the equation that tests the impact training has on mobility. Unfortunately we cannot claim that this procedure eliminates the potential endogeneity completely, as the method is only as good as the training equation is.

VI. Job Mobility during the observed period

As expected job mobility was somewhat higher in the period of 1996 to 1999 compared to the 8% observed in the study of Zweimueller/Winter-Ebmer (2000). Of the workers employed in 1996, 9.9% had changed their employer within one year. The turnover rate for men and women was almost equal. Looking beyond job-to-job mobility we find that job-to-non employment mobility has almost the same size as job-to-job mobility.[15] Table 3 gives an overview of the turnover that took place between 1996 and 1997.

Table 3
Labour market status of dependent workers who were in the1996 sample and not retired in the following year

Labour market status	N of obs.	% of (a)	% of (b)
(a) In sample	5691	100	
(b) Dependent workers	5113	89.9	
(c) With the same employer	4607		90.1
(d) With a new employer (voluntary)	303		5.9
(d) With a new employer (involuntary)	203		4.0
(e) Self-employed	223	3.9	
(f) Housewife, Student	149	2.6	
(g) Unemployed	120	2.1	
(h) Rest	86	1.5	

[14] Classical IV's for training are the educational level of parents (information not available in the Swiss Labour Force Survey), geographical distance from providers of training (dummies for the big cities were not correlated with training), family status (used in the training equation) or the fact of being a house owner or not, as owning a house reduces mobility (although the proportion of house owners in Switzerland is very low among employees and the usefulness of this variable as an IV therefore dubious).

[15] We also estimated the impact training has on job-to-non-job turnover but the results are not reported in detail in this study. Intra-firm mobility might also be of interest but cannot be tested meaningfully with the data set we used.

One has to keep in mind, that all the data are self-reported and that the distinction that is made between voluntary job separations (quits) and involuntary (firing) may be biased. Whereas there is no plausible reason why a person who leaves voluntarily would not report so, involuntary separations could be reported as voluntary and therefore have a positive bias on involuntary and a negative bias on the number of voluntary separations. Nevertheless we have used the data as they were reported, but to keep the potential bias small we created a category "dismissals" where we cumulated the involuntary separations and the people with the labour market status of being unemployed.

In all, we created three different categories for our multinomial logit estimation:

1) *Stayer*: All persons employed in 1997 who had not changed their employer between 1996 and 1997.
2) *Voluntary Mover*: Only those persons who had reported that they had changed employers voluntarily between 1996 and 1997.
3) *Dismissed*: Those persons who had reported that they changed their employer involuntarily or were unemployed at the time of the interview in 1997.

VII. The job-mobility regressions

To estimate the impact of training on turnover we ran a multinomial logit estimate of the following type

$$y_i = x_i\beta + \alpha_1 F_i + \alpha_2 E_i + \varepsilon_i \qquad (4)$$

analogous to the procedure applied in section *D. IV.*

The dependent variable y_i could take the following values:

$$\textit{Mobility}\ y_i = \begin{cases} 1 & \textit{if} \quad \textit{"stayer"} \\ 2 & \textit{if} \quad \textit{"voluntary mover"} \\ 3 & \textit{if} \quad \textit{"dismissed"} \end{cases}$$

x_i is a vector of time invariant and time varying control variables and β the corresponding vector of coefficients to be estimated.[16] The treatment variables are F_i for firm-subsidised training and E_i for employee-funded training and α_1 and α_2 the parameters of interest. ε_i is an error term that satisfies the usual assumptions.

We use a simple before-and-after approach, where current mobility is explained by predetermined factors, including past training. Three extensions of the equation are then made:

Firstly, in order to be able to separate immediate and more long-term effects on mobility we used three different time horizons. In the first step we analysed the turnover between 1996 and 1997, in a second step we included 1998, and finally 1999. Multiple job changes between t and t_{+n} were not counted as hardly any had occurred. As the survey is a rotating panel, the inclusion of more years reduces the sample size (randomly).

Secondly, we subdivided the training variables in two categories: a) training that provided a diploma after the training was completed and b) training without certification.[17]

Thirdly, we tested, as in Zweimueller/Winter-Ebmer (2000), whether training had an impact on searching behaviour.

E. Results

Table 4 shows the detailed results for the multinomial logit equation of the determinants of turnover in the short run (1996-1997). Workers receiving firm-subsidised training have no significantly higher turnover than those not getting this kind of training. The same holds for training that was funded by employees. Concerning the non-significance of the training variables the results so far are in line with most of the results in comparable studies. Somewhat surprising

[16] Personal and job characteristics in our model include age (and age squared), marital status, gender, nationality, education (school years and an additional dummy for apprenticeship), tenure (and squared), part-time, two dummies for the hierarchical position, twelve dummies for different industries, two dummies for firm size and additional dummies for the geographical location of the firm.

[17] This differentiation was suggested by one of the anonymous referees. In our view, however, the direction of the impact on mobility that training *with* or *without* diploma has is unclear. Courses with diplomas surely tend to be longer, are more likely to be more selective and to take place outside the company. Such courses could have a higher signalling value on the labour market and thus increase mobility, on the other hand they could also decrease mobility as longer courses show a higher commitment of the current employer and thus strengthen the ties between employers and employees.

is perhaps the fact, that firm-subsidised training does not decrease significantly the probability to be dismissed.

Table 4
Multinomial estimation of the determinants of job mobility (1996-1997)

Independent variables	(voluntary) Movers		Dismissed	
	Coef.	P>|z|	Coef.	P>|z|
Socio-demographic variables				
Woman	-0.13	0.409	-0.18	0.422
Age	-0.02	0.628	**-0.13**	0.022
Age^2	-0.05	0.493	**0.14**	0.042
Married	**-0.29**	0.041	-0.02	0.909
Swiss Nationality	**0.40**	0.071	**-0.43**	0.074
Training variables				
Firm-subsidised	*0.27*	*0.162*	*-0.33*	*0.233*
Employee-funded	*0.09*	*0.173*	*0.12*	*0.623*
Education				
Years of schooling	0.02	0.505	0.07	0.154
Apprenticeship	-0.22	0.126	0.19	0.358
Industries				
- Manufacturing	0.20	0.788	0.67	0.520
- Hotel & Restaurants	**1.44**	0.070	1.53	0.160
- Construction	0.57	0.467	1.31	0.214
- Retail Sales	0.36	0.633	0.63	0.549
- Communication	-0.11	0.886	0.32	0.768
- IT	0.22	0.771	0.29	0.787
- Banking & Insurance	0.57	0.462	-0.92	0.462
- Public Administration	-0.01	0.990	0.17	0.883
- Education	-0.01	0.987	-0.02	0.989
- Health	0.51	0.510	0.02	0.987
- Other Services	0.21	0.795	0.99	0.358
- Agriculture	0.24	0.891	0.52	0.721
Job characteristics				
- Top management	-0.28	0.174	-0.23	0.400
- Middle management	-0.06	0.706	**-0.69**	0.018
- Part-time worker	0.18	0.280	-0.11	0.650
- Tenure (*10)	**-1.13**	0.000	**-0.01**	0.000
- $Tenure^2$ (*1000)	**1.47**	0.000	**1.31**	0.002
Firm characteristics				
- Small firm (< 20 employees)	0.02	0.905	0.22	0.332
- Large Firm (> 100 employ.)	**-0.31**	0.069	0.03	0.919
- Located in the Italian lang. r.	-0.23	0.588	0.33	0.469
- Located in the French lang. r.	**-0.44**	0.009	0.08	0.695
Number of observations	4150		4150	
Log likelihood	388.6		388.6	
Pseudo R^2	0.121		0.121	

Coefficients with bold characters are significant at least at the 10% level. The reference person is male, has no post compulsory education, is a blue collar worker working full time in the German speaking part of Switzerland, in the industry sector "others" in a company with 100<employees >20.

As for the control variables, most of them are not significant but some of them (tenure, large firm, working in hotels or restaurants) indicate that those with a lower probability to quit receive more firm-subsidised training (see table 2) and vice versa. Other variables (nationality, firm located in the French speaking region) indicate the contrary. Even if we cannot rule out endogeneity completely we find that the assumption that only those with a predicted low turnover rate would get firm-subsidised training would not truly reflect reality.

In order to give a clearer picture of the most important regression results with the extensions described in section *D. VII* the results are summarised in tables 5 to 8. In all cases we have run the same equation as shown in table 4 with the same control variables. For the sake of space we display only the coefficients for the two training variables and their extensions.

Table 5 indicates that the extension of the time dimension leads to one significant result concerning employee-funded training over the period 1997-1999. Over the period of three years employees that paid for their own training in 1996 have a significantly higher probability of leaving their previous employer. The result seems to indicate, that, as noted by Backes-Gellner/Schmidtke (2000) in their paper, employers run a certain risk to loose employees if they do not provide themselves for training. The odds that an employee leaves his employer after having trained at his own expenses is, however, with 1.5 much lower than in the German study (2.8-3.8).

Table 5
Influence on voluntary mobility (movers)

Period	FIRM-SUBSIDISED	EMPLOYEE-FUNDED	Sample size / pseudo R^2
1997	0.265 (0.1617)	0.087 (0.1729)	4150 0.121
97-98	0.0148 (0.1645)	0.245 (0.1663)	2648 0.124
97-99	-0.058 (0.1939)	**0.374**** (0.1879)	1654 0.126

Bold characters show significant variables with asterisks for the 1% significance (*), 5%-significance (**) and 10%-significance (***) respectively; standard errors are in brackets.

Table 6 summarises the results for non-voluntary mobility (dismissals). As in the short run, we find no significant influence on non-voluntary mobility for both, the firm-subsidised and the employee-funded training. In line with the results found by Zweimueller/Winter-Ebmer (2000)

and Baenziger (1999), the results for the period 1997-1999 suggest, that neither firm-subsidised nor employee-funded training increases job-security significantly.

Table 6
Influence on non-voluntary mobility (dismissals)

Period	FIRM-SUBSIDISED	EMPLOYEE-FUNDED	Sample size / pseudo R^2
1997	-0.337 (-0.3372)	0.117 (0.2384)	4150 0.121
97-98	0.2748 (0.2707)	0.0404 (0.2887)	2648 0.124
97-99	0.312 (0.3257)	0.285 (0.3218)	1654 0.126

Bold characters show significant variables with asterisks for the 1% significance (*), 5%-significance (**) and 10%-significance (***) respectively; standard errors are in brackets.

Training that leads to formal recognition (diploma or certificate) does, according to table 7, not lead to an increased mobility. At least in the short run this differentiation does not change the results shown in table 4 considerably, with the notable exception of employer-subsidised training (without diploma) that increases the probability to leave the employer significantly (*relative risk ratio*: 1.8). It is not yet completely clear how to interpret this result as the significance disappears as the time period covered is extended beyond 1997.

Table 7
Influence on mobility with training variables with and without diplomas (1996-97)

Training with and without diploma	"MOVERS"	"DISMISSED"	Sample size / pseudo R^2
Firm-subsidized training *with* diploma	0.0597 (0.1981)	-0.1660 (0.3172)	4141 0.1232
Firm-subsidized t. *without* diploma	**0.5790*** (0.2149)	-0.7394 (0.5243)	4141 0.1232
Employee-funded training *with* diploma	0.1840 (0.2160)	0.0117 (0.3257)	4141 0.1232
Employee-funded t. *without* diploma	-0.1429 (0.2422)	0.2391 (0.3058)	4141 0.1232

Bold characters show significant variables with asterisks for the 1% significance (*), 5%-significance (**) and 10%-significance (***) respectively; standard errors are in brackets.

As in the findings of Baenziger (1999) and Zweimueller/Winter-Ebmer (2000), we find a negative relationship between firm-subsidised training and search activity, except for the year

immediately after training (as shown in table 8). Contrary to these studies with older Swiss data, we do not find that employee-funded training increases search activities of these workers.

Table 8
Influence on search behaviour

Period	FIRM-SUBSIDISED	EMPLOYEE-FUNDED	Sample size / pseudo R^2
1997	-0.103 (0.0707)	-0.074 (0.0727)	5379 0.074
97-98	**-0.245***** (0.0776)	-0.063 (0.0768)	3491 0.087
97-99	**-0.282***** (0.0894)	-0.087 (0.0885)	2204 0.085

Bold characters show significant variables with asterisks for the 1% significance (*), 5%-significance (**) and 10%-significance (***) respectively; standard errors are in brackets.

F. Conclusions

In our study we find that training that is subsidised by firms goes mainly to the well-educated part of the work force. Although these workers are more likely to look for outside opportunities, our results confirm previously found results insofar that firm-subsidised training seems to reduce the probability that workers search for new jobs effectively. Up to three years after the training measure, firm-subsidised training has no significant effect on voluntary job separations (with a exception in the short run of courses that were not completed with a diploma). We can conclude, that, although firm subsidised training reduces search activities, it has contrary to the results reported in the previous Swiss studies no significant negative effect on quits. This casts doubt on the claim of some researchers (*hypothesis 2*) that companies can reduce turnover by offering training. Regarding our *hypotheses 1 & 2*, they are both not appropriate; our results are a mix of both hypotheses. Comparing with older studies, the results also suggest that it is necessary to repeat the analysis over different periods of the business cycle to get an appropriate picture.

Firm-subsidised training does not (although the sign of the coefficient is negative) reduce the probability that the firm dismisses the employee significantly (*hypothesis 3* is therefore refuted). This result speaks either against the hypothesis that employers only train workers they are sure to retain or is a sign that such selection effects are only of short-term nature.

Although we find evidence for the hypothesis that some workers compensate for non-receipt of training from their employers with self-initiative, employee-funded training has little impact on job-mobility. Searching activities are not increased (*hypothesis 4* is refuted) and quits are only increased in the long run (*hypothesis 5* partially accepted).

Finally, according to *hypothesis 6*, employee-funded training should not influence the decision of the employer to dismiss an employee, which is supported by our results.

With the empirical analysis presented here, it is not possible to differentiate between or test specific extensions or reconsiderations of Becker's human capital theory. However, the results point into the direction, that the common statement of these theories, that employers can invest in general skills without running the risk of loosing their employees subsequently, can be backed up by our data.

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THE ROLE OF HRD IN CREATING OPPORTUNITIES FOR LIFELONG LEARNING:

AN EMPIRICAL STUDY IN BELGIAN ORGANISATIONS

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ABSTRACT

Within the scope of the TSER-project (1998-2000), that aimed to examine new HRD initiatives in learning oriented organisations throughout Europe, this study confronts the Belgian findings with the European outlook. By making use of a survey that was held among a group of 165 companies, of which 39 are located in Belgium, it became clear that the Belgian HRD professionals don't position themselves on the first place as strategic partners in realising the business. Also the results concerning the strategies do not paint a picture of very innovative HRD practices. However, the professionals indicate that strategies to support the business, to stimulate learning and knowledge sharing will become the most important strategies for the future. The factors that appear to burden the change process most strongly, are a lack of time on behalf the employees and managers, a lack of clarity on HRD's role, insufficient learning culture and low flexibility of the organisational structure.

INTRODUCTION

Lifelong learning has become, and will remain, an important topic for Europe, as the continent develops into a "learning society" (Gass 1996; Brandsma, 1997). Work organisations are becoming important partners in this learning society, as they provide more and more opportunities for continuous learning to their employees with the objective to optimise organisational learning as a whole (Pawlowski & Bäumer, 1996). This new focus on employee learning changes the role of HRD departments.

Despite the growing number of publications on Human Resource Development's (HRD's) role in organisational learning many uncertainties remain. Especially the question of how to bring their new role as a learning consultant into practice remains unanswered. There is little 'recipe' literature, and there are only very few instruments to help HRD officers in this regard. Meanwhile, many interesting initiatives are being undertaken by HRD practitioners throughout Europe in facilitating employee learning on a continuous basis and thus supporting the strategic learning processes of the organisation (Tjepkema, Horst, Mulder & Scheerens, 2000).

The European project[1] aimed to examine these HRD initiatives, with two main objectives. The first objective was to clarify the specific European outlook[2] on the role that HRD in learning oriented organisations can fulfill in lifelong learning, and thus contribute to the discussion on a 'European

[1] "The role of HRD within organisations in creating opportunities for lifelong learning: Concepts and practices in seven European countries", funded by the European Commission under the Targeted Socio Economic Research (TSER, 1998-2000).

[2] The theoretical framework on HRD's role, as outlined in the following section, is based on literature of American origin and data collected in the Netherlands. The research aimed to find out whether the framework is also valid for the European situation.

model of lifelong learning'. The second objective was to contribute to the further professionalism of HRD in Europe. Within the scope of the larger TSER -project, this paper gives an account of the survey[3] and confronts the Belgian findings with the European outlook.

1. ORGANISATIONAL LEARNING IN A LEARNING-ORIENTED ORGANISATION

As a result of the ever-increasing rate of technological change -induced by developments such as globalisation and the current 'explosion of knowledge'- the organisational learning capabilities are pinpointed as the key strategic factors for organisations in the nineties (Nonaka, 1991).

Argyris and Schön (1978) suggested that organisational learning is a process in which members of an organisation detect error and correct it by restructuring organisational theory of action, embedding the results of their inquiry in organisational maps and images. This learning can occur at two levels. The first level is that of single-loop learning, which means that the organisation makes small adjustments in its actions, but doesn't radically change them. Double loop learning involves detecting errors, but finding solutions outside the current ways of thinking and acting – there is a change in the system itself. Argyris and Schön (1978) have also determined a third level of organisational learning, which they labelled "deutero learning". This refers to the capacity of organisations to learn how to carry out, and how to optimize its single- and double-loop learning processes. In other words, it refers to "learning how to learn" (Senge, 1990; Swieringa & Wierdsma, 1992).

For learning on an organisational level, organisations depend on the learning of their employees, since they embody the capacity to acquire or create new knowledge for the organisations, disseminate this knowledge to others within the organisation and apply the new knowledge within the organisation[4] (Dixon, 1994). Organisations deliberately set out to create learning structures for employees, believing that they need 'learning individuals' to realise 'organisational learning'. However, employee learning in itself is not enough to ensure learning at an organisational level. Also an adequate communication (to transfer to other levels), and a certain amount of empowerment of employees within the operational core (to make improvements in the workplace) is important in this respect (Senge, 1990).

Considering the above, a learning organisation can be described as an organisation which responds to (and anticipates) changes in its environment by learning on a strategic level. Moreover, it deliberately aims at improving its ability to learn by single loop and double loop learning. It makes use of the learning of all employees, therefore this employee learning is enhanced at all hierarchical levels (deutero-learning) (Argyris & Schön, 1978). A learning organisation accepts both the environmental

[3] After the case study research a survey was held under a larger group of organisations (cf. Methods)
[4] Together, these activities make up what is also known as a 'knowledge cycle'.

turbulence and the fact that it cannot predict which changes will occur (Pedler, Boydell & Burgoyne, 1991). This description doesn't present a clear picture of such a company. The concept is more adequately described as a metaphor or an ideal type (Leys, Wijgaerts & Hancké, 1992), it is a way of looking at organisations wherein the process of organisational learning is the centre of attention.

Organisations that focus on creating opportunities for employee learning, with the long -term goal of becoming a learning organisation, can be labelled 'learning oriented organisations'. Leys et al. (1992) describe them as organisations which create (on-the-job as well as off-the-job) facilities for employee learning. Moreover these organisations stimulate employees not only to attain new knowledge and skills, but also to acquire skills in the field of learning and problem solving and thus develop their capacity for future learning (Tjepkema & Wognum, 1996). One could say that becoming a learning oriented organisation is the first stage in the growth process towards a learning organisation.

Research question 1: organisational context- learning oriented organisations[5]

a) What are the companies main strategies?

b) What are the main change strategies employed to reach this aim?

c) Why do organisations want to increase their potential for organisational learning?

2. HUMAN RESOURCE DEVELOPMENT IN LEARNING ORIENTED ORGANISATIONS

As organisations develop into learning oriented organisations, this has a profound impact on the relationship between work and learning. Whereas learning used to be primarily equalled to training, it now becomes predominantly associated with learning from experience, and self-directed learning, necessary to cope with changing demands in the organisational environment. Similarly, learning is no longer regarded solely as a classroom activity. This changing view of learning has far-reaching consequences for line managers, who are expected to manage the workplace as a place fit for learning. In addition, this shift has an impact upon employees who are now expected to take greater responsibility for their own learning. Finally, it considerably affects the role and tasks of HRD professionals, who are involved in organising learning activities for the organisation (Sambrook & Stewart, 1999).

A NEW ROLE FOR THE HRD FUNCTION

The role which is generally contributed to HRD practitioners in the literature, is the role of consultant towards line management on how to facilitate and stimulate employee learning in the workplace, and

[5] In order to provide a background against which to interpret the findings with regard to the HRD function the following three questions were asked.

how to link this learning to organisational needs and goals. The word 'trainer' is really no longer an adequate label for their function. The new role of HRD practitioners will be that of a strategic learning facilitator, performance consultant or even change agent (Laiken, 1993; Marsick & Watkins, 1993). In general, the field of HRD seems to be moving from a reactive, isolated business function to a more strategic factor (Barham & Rassan, 1989; De Vos & Buyens, 2000; Buyens, Van Schelstraete, De Vos & Vandenbossche, 1997).

More specifically, the vision of HRD departments in learning oriented organisations with regard to their own role can be characterised by three basic principles. These principles are mentioned in the literature as well as by HRD departments who are working on the development towards a learning organisation (Tjepkema & Wognum, 1995).

Perhaps the most distinguishing working principle of HRD departments in learning oriented organisations is the broadened view of their own work field. It's not limited to training, but stretched to facilitating and supporting learning processes within the organisation, with the aim to contribute to meaningful organisational learning processes. As a result, the HRD department not only fosters formal learning, but also strives to enhance informal and even incidental learning. Next to that, the department not only focuses on individual learning, but also aims at facilitating the collective learning of groups and organisational learning (Stewart, 1996).

The second working principle is that 'learning' is a shared responsibility of management, employees and the HRD department. The HRD department regards its own role in this respect as primarily supportive (e.g. the role of consultant). This implies a shift away from the idea that training is primarily the responsibility of the training department.

Thirdly, the processes of learning and working are considered to be very much intertwined. Learning is being regarded as a normal part of everyday work and working is seen as a rich source for learning (McGill & Slocum, 1994). On-the-job learning is stimulated as much as possible. Therefore, a considerable amount of training takes place on-the-job. Off-the-job training activities will remain important, but they are no longer the dominant way to organise the learning processes. They fulfill a supportive role with regard to the learning and training which takes place on the job.

Research question 2: Vision of the HRD function

How do HRD departments in learning oriented organisations throughout Europe envision their own role in stimulating and supporting employees to learn continuously, as a part of everyday work (with the intent to contribute to organisational learning, and thus enhancing organisational competitiveness)?

STRATEGIES ADOPTED BY HRD PROFESSIONALS

On one hand, a change of focus occurs in the way in which the HRD professionals carry out their more traditional roles, such as the role of the trainer, because of changes in the nature of training programmes. On the other hand, the joint responsibility for HRD brings some new tasks for HRD professionals (De Vos & Buyens, 2000; De Vos & Buyens, 1999; Buyens et al., 1997). The two most typical tasks for HRD professionals in learning oriented companies seem to be: consulting non HRD professionals on HRD specific matters and quality control with regard to training activities carried out by line management and employees (Tjepkema & Wognum, 1995; Buyens & Vanhoven, 2000).

'Facilitating employee learning' in the broadest sense is the primary concern of HRD departments in learning oriented organisations. As such, this leads to a broadened range of interventions provided by the HRD department. The focus is on informal learning, training activities are no longer HRD's main product. Moreover, the outlook of HRD interventions changes. The interventions are specifically aimed not only at learning new qualifications, but also towards enhancing learning capacities of employees. Especially development activities, which are less formalised than training, increase in number (Tjepkema & Wognum, 1995).

Though training is but one of the offered activities, it remains an important one. In many cases training remains the most suitable approach for the transfer of knowledge and certain skills. The training methods change, however. The trainee will take a more active role towards his own learning and training. The trainer explicitly teaches trainees how to learn, and how to shape their own learning activities. Also, training and work are more closely linked. Not only by creating more on -the-job training, but also by using real-life problems in training activities.

Next to these changes in the nature of HRD interventions, attention is being paid to fostering learning on the job in general, by creating a work environment favourable for learning (for example: creating a mentor system, job rotation, organising meetings between employees with similar expertise). The most important condition for learning in the workplace, a stimulating work environment, remains mainly a responsibility of line management. HRD professionals can provide advice and assistance to line management in this respect.

Research question 3: Strategies
What strategies do HRD departments adopt to realise their envisioned role?

Research question 4: Influencing factors

METHODS

The survey is part of the larger programme for Targeted Socio-Economic Research (TSER). TSER is a research programme organised and sponsored by the European Union to facilitate research on current social and economic issues of great relevance to Europe. Lifelong learning is one of the themes that are studied within the framework of the TSER-programme. This global research project on lifelong learning, of which the underlying paper reflects only the second part, covered two years.

1. THE GENERAL TSER-PROJECT

To study the research questions, as outlined in the previous sections, a combination of qualitative and quantitative research methods was used.

In the first phase of the project case study research was the main method. In each of the participant countries[6] 4 case organisations (28 in total) were visited and interviews were held with HRD professionals, (line-)managers and employees. The aim was to gain an in -depth understanding of the concepts of the HRD-departments, the strategies they adopt to bring these into practice and the facilitative factors as well as the difficulties they encounter during this implementation process.

In a second phase of the study a survey was held under a larger group of organisations (165 in total).

Because the literature on concepts such as learning organisations and fostering workplace learning has traditionally been dominated by the perspectives of US and Japan, and the situation in Europe differs in several ways from the situation in these countries, it was useful to gain m ore insight into the European perspective. To be able to compare the results of the European study with Japanese and US views on learning in work organisations, a literature review was conducted of publication about HRD in Japan and the US. The literature review focused on the same questions as the case study research and the survey.

2. THE SURVEY

[6] The research project team consisted of partners from seven European countries (Belgium, Finland, France, Germany, Italy, the Netherlands and the United Kingdom), plus a member of the European Consortium for the Learning Organisation (ECLO).

The main purpose of the survey was to generalise the findings from the case study research and to establish the degree to which HRD departments in other learning oriented organisations throughout Europe:

- hold the same (or comparable) viewpoints with regard to their role in the organisation as those found in the 28 case study organisations;
- adopt similar strategies to bring these viewpoints into practice;
- point out the same (or similar) conducive factors as the HRD departments in the case study organisations, and encounter the same (or similar) difficulties in realising their new role.

MEASURES

After a thorough analysis of the results of the case study phase a questionnaire was constructed on the basis of these findings. Project partners were asked to provide feedback and ECLO asked 26 of its corporate members to fill out the questionnaire as a pilot test. On the basis of the pilot and feedback of the partners, the questionnaire was finalised.

The questionnaire consisted of both closed and open questions on the concepts and practices of HRD departments in learning oriented organisations. Beside some descriptive questions (on the organisation, HRD function, respondent etc.), it addressed the same topics as the case study research: organisational context, vision of HRD function on own role, strategies to realise envisioned role and conducive and inhibiting factors.
Many questions not only relate to the current state but also to the expected evolution of this situation. Respondents were asked to indicate both current and expected future importance on a five-point scale[7].

SAMPLE

Just like the case study research, the survey was aimed at HRD departments in large (500 employees or more) organisations, which can be considered to be learning oriented organisations. To be able to verify the case results, it was important to select organisations according to the same selection criteria, namely:

- there is reason to assume the company can be regarded a learning oriented organisation[8]

[7] For the current importance of each aspect, the scale runs from 1 (very unimportant) to 5 (very important). For the estimated future development, the scale runs from 1 (much less important) to 5 (much more important). Thus, when reading the tables, it is important to bear in mind that the mean scores displayed in the two columns (current and future importance) cannot be compared as such. For example, a 4 for current importance and a 5 for future importance, does not mean that the importance is expected increase with 1 point. Instead, it means respondents consider the item currently as 'important', and expect it to become 'much more important'.

- the company has an HRD function;
- the company has at least 500 employees.

Large organisations were chosen because these usually have a specialised HRD department with an explicit view on its own role within the organisation. Though this may also hold true for some smaller organisations, the survey was held under large organisations in order to facilitate comparison of results. Furthermore, concepts and initiatives found in large organisations often also prove to be useful for smaller organisations.

The primary respondents were those with a strategic, managerial role in the HRD function. Since they have a helicopter view of the HRD function, they were able to answer all the questions. In case of very large organisations, the HRD function on the division level or a large establishment was selected, not the HRD function on the corporate level.

RESULTS

An issue that returned quite often was the question whether the results are different for the seven countries included in the study. In other words, is there a European outlook on the concept of HRD in the organisations selected? This appeared to be a question that was hard to answer. On the one hand because finding national differences was not one of the research questions, and cultural, political, jurisdictional and other related factors were not included in the study. On the other hand, the rather small sample[9] of companies didn't allow us to make a firm judgement on the situation of a specific country. Nevertheless, since the number of companies in the survey was considerably larger than the case studies (165 versus 28), it was worthwhile to explore possible differences between countries and to draw some conclusions on for instance the specific Belgian situation. The absolute differences between countries in the study were small, but there appeared to be some striking differences. Various Kruskall-Wallis tests were performed, and the results showed that many of the items within variables were statistically different, but one can argue that this is hard measurement with soft data.

Considering the above, the paper provides an overview and single out the most important characteristics specific for learning oriented organisations in Belgium. The text focuses successively on the main organisational strategies of the survey companies, the envisioned role of the HRD departments, the strategies to realise this envisioned role and factors influencing this process.

[8] Organisations which create (on-the-job as well as off -the-job) facilities for employee learning, and stimulate employees not only to attain new knowledge and skills in the field of learning and problem solving and thus develop their capacity for future learning (Tjepkema & Wognum, 1996)

For the Belgian situation, the results are highly similar to the overall picture. Nevertheless, it is remarkable that the Belgian scores are the lowest on average. This is especially the case for the variables that describe the current situation. For the future, still half of the scores are scored below average. This may be caused by cultural factors, in the sense that Belgian respondents tend to answer these kinds of questions modestly.

1. ORGANISATIONAL CONTEXT

With regard to the companies main strategies (see Table 1), the Belgian picture is very similar to that of the European outlook. Dealing with strong competitive markets caused by globalisation and fast changing technologies, improving client focus is mentioned as an issue of major importance. Other key strategic issues are improving and innovating products, processes and services, quality improvements and optimising the internal organisation.

Those strategies that are most important now, are also considered to increase most in importance in the future. Whereas those strategy elements that are not so central to the business now are also expected to become more relevant, but to a lesser degree.

With regard to the specific human resource strategies, it appears that the increased attention for development of the employees is a response to those strategic challenges affecting the core business and in that sense, they are of secondary importance.

Table 1: Organisational strategies (mean scores)

	Current importance		**Future importance**	
General strategies	**Belgium**	**Overall**	**Belgium**	**Overall**
Increasing client focus	4.3	4.5	4.5	4.4
Innovation products and services	3.6	4.2	4.3	4.2
Improvements products and services	3.8	4.2	4.2	4.2
Quality advantages	3.9	4.2	4.2	4.1
Optimising the internal organisation	3.8	4.0	4.3	4.2
Improving flexibility	3.6	3.9	4.1	4.1
All strategic issues are aimed at increasing competitiveness	3.3	3.9	3.9	4.0
Cost advantages	3.7	3.9	3.8	4.1
Concentration on core competencies	3.6	3.8	4.2	4.1

[9] In Belgium respondents from 39 companies filled out the questionnaire.

Strategic alliance and networking	3.4	3.7	4.1	4.0
Internationalisation	3.2	3.6	3.6	3.8
Mergers and acquisition	2.9	3.1	3.2	3.4
Outsourcing of processes	3.0	3.1	3.6	3.4
Diversification	2.9	2.8	3.3	3.3
Human resource strategies				
Improving knowledge sharing	3.4	3.8	4.4	4.3
Improving employee learning	3.4	3.8	4.3	4.2
Improving learning culture	3.4	3.7	4.3	4.2
Implementing competence management	3.2	3.6	4.2	4.2

Also the results about the change initiatives (see Table 2) in Belgian organisations are in line with the European results. In order to meet their new strategic challenges, the Belgian companies employ a rich variety of change strategies. Creating a client oriented culture, attention to communication and information sharing and changes in organisational structures appears to be the most important change initiative. But initiatives regarding increased employee responsibilities, attention to management development and creating a learning culture are also encountered. The involvement of HRD in these change initiatives is highest in the areas which are directly associated with learning and development, such as management development, communication and information sharing, improvement of learning culture and changes in HRD strategies. This means that HRD's role as a strategic partner is not considered to be very well established. It appears that most HRD professionals narrow their own role and don't position themselves as strategic partners in realising business objectives, such as creating a client oriented culture.

Table 2: Change processes and involvement of HRD (mean scores)

	Current importance		**Involvement of HRD**	
Change initiatives	**Belgium**	**Overall**	**Belgium**	**Overall**
Creating/improving client oriented culture	4.0	4.2	3.2	3.5
Attention to management development	3.5	4.0	3.8	4.3
Attention to communication and information sharing	4.0	4.0	3.8	3.8
Changes in organisational structure	4.0	3.9	3.4	3.5
Improvement of learning culture	3.4	3.8	3.8	4.0
Process orientation	3.3	3.8	2.7	3.2

Increased employee responsibilities	3.6	3.8	3.2	3.4
Translating central strategies in operational policies on a lower level	3.3	3.7	2.9	3.3
Changes in HRD strategies	3.3	3.7	3.7	4.1
Team building	3.3	3.6	3.3	3.5
Sharing a mission statement	3.3	3.6	3.0	3.2
Improvement of learning abilities	3.2	3.6	3.4	3.9
Changes in HRD organisations	3.1	3.4	3.5	3.9

Concerning the motives (see Table 3) for becoming a learning organisation, the Belgian organisations emphasise the personnel-related forces more strongly. For example, a need for innovation and economic factors play a less important role as the desire to increase employee commitment and improving quality of work. This is in contrast with the overall picture where both business -related and personnel-related motives are significant forces driving implementation of learning organisation concepts.

Table 3: Reasons for becoming a learning organisation (mean scores)

	Importance	
Reasons for becoming a learning organisation	**Belgium**	**Overall**
Need for innovation	3.7	4.1
Increasing employee commitment	4.3	4.1
Improving quality of work	4.0	4.0
Increasing possibilities for personal development	3.8	4.0
Economic factors (e.g. cost reduction, competitiveness)	3.5	3.9
Improving employee retention	3.5	3.5
Improving quality of life of employees	3.4	3.4

2. ENVISIONED ROLE OF THE HRD DEPARTEMENT

Organisations seek to improve learning possibilities for employees from a strategic necessity, and start up a wide variety of initiatives to do so. Research question 2 concerns the way in which HRD departments in these learning oriented organisations envision their own role in stimulating and supporting employees to learn continuously.

OBJECTIVES

The analysis of the quantitative data indicates that HRD functions have objectives within five areas (see Table 4), more specifically: supporting the business, supporting (informal) learning, supporting knowledge sharing, development and co-ordination of training and changing HRD practices. All are rather important, some more than others but differences aren't big enough to reflect a real rank order of objectives. Of course, changing HRD practices is an intermediary objective, but some HRD functions strive for a reorganisation of HRD, in order to fulfill their tasks.

In line with the general picture of the European outlook the Belgian organisations expect that, even though current attention for supporting informal learning[10] is not as great as for other objectives, these objectives will increase most in importance in the future. From the data we can also conclude that the Belgian respondents, in contrast with the overall picture, don't position themselves first as strategic partners in realising business, which confirms the results concerning HRD's involvement in important organisational change initiatives. This conclusion is compatible to the strong emphasis on the more traditional objective of development and co-ordination of training, which is also the case for the other participant countries. Nevertheless, this is the only objective that won't become more relevant in the future.

Table 4: Objectives HRD functions (mean scores)

	Current importance		**More or less attention in the future**	
Objectives	**Belgium**	**Overall**	**Belgium**	**Overall**
Support current strategic objectives in general	3.4	3.9	3.8	3.9
Support current organisational change programmes	3.1	3.8	3.8	3.8
Support management development	3.4	3.8	4.0	4.1
Promoting employee development	3.5	3.8	3.9	4.0
Increasing learning abilities employees/managers	3.1	3.5	4.1	4.0
Stimulating use of informal learning opportunities	3.0	3.5	4.0	4.0
Implementing a learning culture	2.9	3.4	4.1	4.0
Supporting communication/knowledge sharing	3.4	3.7	4.1	4.1
Development and co-ordination of training	3.8	3.9	3.8	3.7
Efficiency of HRD activities	3.0	3.6	3.9	3.9
Increasing utilisation of HRD services within	2.9	3.6	3.8	3.8

[10] Increasing learning abilities, stimulating the use of informal learning opportunities and implementing a learning culture.

the organisation				
(Further) professionalism of HRD practitioners	3.3	3.6	4.0	4.0
Changing HRD practices	3.0	3.5	3.9	4.0
Concentration on core competencies of the HRD function	3.0	3.3	3.8	3.6

DIVISION OF HRD TASKS

As shown in Table 5, the role of HRD professionals is predominantly one of designing and realising HRD processes, and to a lesser degree providing operational support for line- managed learning processes. We can conclude that HRD professionals fulfill a mix of 'traditional' and 'new' HRD tasks. They fulfill consulting tasks (and pragmatic support) but traditional tasks in the design and realisation of training also remain important.

Table 5: Roles of HRD (mean scores)

	Current situation		**Expected evolution**	
Role	**Belgium**	**Overall**	**Belgium**	**Overall**
Design and realisation of HRD processes	3.5	3.9	3.7	3.6
Operational support for line-managed learning processes	2.9	3.5	4.1	3.9
Proactive development and implementation of innovative HRD concepts	2.8	3.3	4.0	3.9
Management of relationships	2.8	3.3	3.9	3.9
Management of the HRD function	2.5	3.2	4.2	4.0
Support for defining and implementing of organisational strategies	2.5	3.1	4.0	4.1
Realisation of organisational change projects	2.6	3.1	4.0	4.0

With regard to the division of HRD tasks, Table 6 states clearly that HRD professionals, in Belgium as well as in the other participating countries, still carry the biggest share of responsibility for HRD. Managers are also an important category, whereas e mployees and external training providers are seen as less involved. Overall, the respondents seem to find it desirable for the future that HRD professionals carry a little less responsibility. In front of that, managers and employees are expected to play a more active role in supporting employee learning. In Belgium, the respondents only desire a stronger involvement of the employees towards their own development. They don't wish to assign a

bigger responsibility to the managers. As a consequence, the difference in commitment between managers and HRD professionals stays rather equal.

Table 6: Parties involved in HRD

	Current situation		Desired situation	
Parties involved	**Belgium**	**Overall**	**Belgium**	**Overall**
HRD professionals	40%	43%	36%	34%
Managers	28%	28%	28%	33%
Employees	18%	17%	22%	23%
External training providers	14%	17%	14%	14%
Total	100%	105%	100%	104%

3. STRATEGIES ADOPTED TO REALISE ENVISIONED ROLE

The case studies yielded a wide range of strategies employed by HRD professionals to realise their envisioned role, without a clear indication of the relative weight of each of these strategies. The survey attempted to establish somewhat of a ranking order. This proved difficult, since the respondents rated nearly all strategies as 'relevant' or 'important' as shown in Table 7.
However, most noticeable when overlooking the general picture and the specific situation in Belgium is the importance still attached to formal training programmes. Also in Belgium, training-related strategies still fulfill a significant role. Among the least important strategies are instruments and initiatives (improvement of learner oriented methods, self-directed learning programme s and open learning centre) to increase employee responsibility for learning.

As such, results do not paint a picture of very innovative HRD practices, dominated by new methods such as knowledge management networks and stimulating learning climate in the workplace. For one part this is because HRD objectives are not that far-stretched. For another part, these outcomes might indicate that HRD practices to some extent fall behind HRD vision. HRD professionals do want to broaden their horizon by also supporting more informal modes of learning, and by co-operating with managers and employees, but in practice their work is still dominated by the more traditional, training related tasks.

For the future, the respondents expect all strategies to become more imp ortant. There is no immediate difference between strategies in the field of training and in other areas.

Table 7: HRD strategies (mean scores) [11]

	Frequency of use in current situation		Future use	
HRD strategies, techniques, instruments	**Belgium**	**Overall**	**Belgium**	**Overall**
Implementing teamwork	3.0	3.5	3.8	3.9
Using competence management	2.3	2.9	4.1	4.1
Culture change programmes	2.2	2.8	3.6	3.9
Stimulating workplace learning	3.3	3.4	4.0	4.1
Personal development plans	2.7	3.3	3.9	3.9
Coaching	3.0	3.2	4.1	4.1
Using intranet	2.9	3.1	4.0	4.1
Benchmarking	2.3	3.0	3.5	3.8
Mentoring	2.5	2.8	3.8	3.9
Improvement of learner oriented learning methods	2.1	2.7	3.6	3.8
Self-directed learning programmes	1.9	2.5	3.5	3.7
Open learning center	1.7	2.3	3.4	3.5
Knowledge exchange networks	2.4	3.0	3.8	4.0
Stimulating knowledge management	2.3	2.9	3.8	4.1
New training courses	3.5	3.8	3.6	3.5
New types of training courses	2.9	3.4	3.8	3.8
Use of modern media for training	2.8	3.2	3.9	4.0
Supporting management in HRD tasks	2.8	3.4	3.8	3.9
Decentralisation of HRD activities	2.4	2.9	3.5	3.4

4. INFLUENCING FACTORS

Though HRD objectives indicate that HRD professionals are not only interested in providing training, but also seek to support other forms of learning, HRD practices reveal that training is still very dominant. As a result training related tasks are still very important in their total task load, next to newer tasks such as consulting line management and employees. And though HRD professionals feel it is important to share responsibility for HRD with line management and employees, they still carry most of the responsibility themselves. For these reasons, it is relevant to investigate whether there are specific reasons for this situation.

[11] Five clusters of strategies could be identified, linked to the five categories of HRD objectives: strategies aimed at supporting the business, stimulating (informal) learning, knowledge sharing, training- related strategies,

The European organisations in general report a slight lack of clarity on HRD's role, some lack of time for learning on the part of employees and some lack of time for managers for performing HRD tasks. Though Belgian HRD professionals indicate that there is a high motivation for learning and enough money/time for HRD initiatives in their organisations, certain specific influences are keeping HRD professionals from changing their practices.

The factors which appear to burden the change process most strongly, are insufficient time for managers to perform HRD tasks, lack of clarity on HRD's role and goals, insufficient learning culture, low flexibility of organisational structure and insufficient time for learning on part of the employees.

Table 8: Influencing factors and the nature of their influence (mean scores) [12]

	Existent in organisation?		Nature of influence	
Influencing factors	**Belgium**	**Overall**	**Belgium**	**Overall**
Results of new HRD activities (negative-positive)	3.3	3.5	3.4	3.7
Motivation for learning (low-high)	3.4	3.4	3.3	3.8
Attitude to change (negative-positive)	2.9	3.3	3.1	3.6
Money for HRD activities (insufficient-sufficient)	3.4	3.3	3.3	.4
Motivation for sharing knowledge (low-high)	3.0	3.1	3.2	3.5
Learning culture (insufficient-sufficient)	2.7	3.0	3.1	3.5
Clarity on HRD's goals (low-high)	2.6	3.0	2.7	3.4
Time for HRD professionals (insufficient-sufficient)	3.3	3.0	2.9	3.3
Flexibility of organisational culture (low-high)	2.7	3.0	2.9	3.3
Clarity on HRD's role (low-high)	2.4	2.9	2.6	3.4
Time for learning on part of employees (insufficient-sufficient)	2.8	2.8	3.1	3.3
Time for managers for performing HRD tasks (insufficient-sufficient)	2.2	2.5	2.5	3.0

CONCLUSIONS AND DISCUSSION

changing HRD practices.

[12] Based on the case study results, an overview of the most important influencing factors was put to the survey respondents. They were asked to indicate whether these factors were present in their companies, on a scale from

One of the most distinguishing features of a 'learning organisation' is that it operates in an environment marked by a high rate of change. A learning organisation accepts both this environmental turbulence and the fact that it cannot predict which changes will occur (Pedler et al., 1991). Concerning the organisational context, the companies involved in the study can be labelled as learning oriented organisations. The key *strategic issues*, such as client focus and improving and innovating products, have in common that they all focus on improving flexibility in order to respond quickly to the fast changing world. In this respect we can speak of organisational learning.

The increased attention for development of the employees is a response to these strategic challenges affecting the core business. However, the Belgian respondents emphasise the personnel-related *motives* stronger for becoming a learning organisation. Important to consider is that the business-related motives are probably paramount, whereas personnel-related motives are a result of the business challenges. In other words, for learning on an organisational level, organisations depend on the learning of their employees (Dixon, 1994). Moreover, the survey was held under HRD professionals, who are in a people-oriented line of work, and therefore might have biased views on the importance attached to these kinds of motives.

In order to stimulate their development towards a learning organisation, the organisations employ a rich variety of *change strategies*, which do not only focus on creating facilities for employee learning. Within the framework of this study, it is important to notice that HRD's role as a strategic partner is not considered to be very well established. Especially in Belgium, the involvement of HRD professionals in the change initiatives is mainly associated with training and development.

Although the Belgian HRD professionals fulfill a mix of consulting and traditional tasks, there is no clear shift from 'trainer' to 'consultant', as mentioned in the literature (Marsick &Watkins, 1993). The objectives of development and co-ordination of training still mark the *role* of the Belgian HRD professionals. And though HRD professionals feel it is important to share responsibility with line management and employees, they still carry most of the responsibility themselves.

Also the *HRD practices* are not very innovative. New methods, in which the trainee takes a more active role towards his own learning and training or in which working and learning are more closely linked, don't hold an important position. Nevertheless, the respondents argue that in the future the focus will come on informal learning and that they desire to involve the employees stronger. They expect a change of focus in the way in which they carry out their traditional role (Tjepkema & Wognum, 1995).

1-insufficient/low/negative- to 5 – sufficient/high/positive-, and how their presence or absence influenced the attainment of HRD objectives, also on a scale from 1 –very negative – to 5 – very positive -.

Concerning the *influencing factors*, it appears that HRD professionals find it difficult to clearly communicate their new role, objectives and to bring these into being. One of the challenges encountered is the question of how to actively involve line management and employees in learning or HRD tasks. Possible reasons for a lack of time on behalf of the managers is that the managers are still only judged on their operational results, not on achievements with regard to employee development and a lack of skills on the part of the managers to fulfill HRD tasks. Explanations for the experienced lack of time for learning on the part of employees are that they still associate learning very strongly with classroom training (Simons, 1999), they don't value workplace learning as much. It might also be that they are not yet used to their new role as 'active learner', and/or may feel not skilled enough to take the initiative for their own learning process. Considering the above it's important that the HRD professionals articulate their own role in the learning process and make a distinction with the tasks of either the managers as the employees.

RECOMMENDATIONS

Based on the conclusions some preliminary recommendations can be made, with regard to the role of managers, the strategic challenges for HRD professionals, the skills of HRD professionals, the employee motivation for learning, the role of organisations and government and future research.

1. ROLE OF MANAGERS

First of all, it's necessary to open up the debate on what exactly is expected of managers with regard to HRD, and what remains/becomes the role of HRD professionals. Some seem to expect the HRD function to vanish, as learning issues are more and more integrated with general management, while others appear to see a different role for HRD professionals.

The delegation of HRD responsibilities carries problems and risks (Horwitz, 1999), as line managers are not specialists in people development and ownership of HRD responsibility may not be part of their performance objectives. On the short term, it is necessary to find strategies to involve managers in HRD, by changing their views on learning and increasing their motivation to support learning. HRD professionals could realise this attitude change by actively supporting managers in their new tasks or even by optimising professionalism in the field of HRD. In the long run, it would be interesting to consider incorporating HRD skills in all management training programmes, if HRD is truly to become an integrated part of business. The way in which management supports their staff in learning could also become an issue in performance appraisals and management career planning.

2. STRATEGIC CHALLENGES FOR HRD PROFESSIONALS

Human assets are becoming the most important wealth of an organisation if they are adequately nurtured and if their potential is efficiently developed. Therefore, HRD functions should be more precisely defined and recognised by top management as a major part of the global development strategy of the company. Also HRD functions themselves has to increase their strategic orientation in order to get involved in strategic processes. Furthermore, the HRD role and strategies must be reconsidered in the future from a learning perspective instead of the classical training perspective. Such a change is linked to the knowledge and a correct understanding of the very concept of the learning organisation.

3. HRD PROFESSIONALS SKILLS

Instead of trainers, HRD professionals become now consultants, who also have to manage the link between their activities and the company strategy. This requires a totally different set of skills, since it is more a role 'behind the scenes' instead of 'on s tage'. It would be worthwhile to consider supporting professionalism of HRD professionals on a more broad scale. Professional associations from different European countries could create lively and inspiring networks of HRD professionals where they can exchange ideas and commonly try to solve difficult challenges. These platforms may also serve to create a common terminology. It has become apparent that many practitioners do not adopt the term HRD and do not speak of their organisations as being learning oriented. The issue of language and terminology is an important one, and meanings and definitions must be further explained and shared if academics and practitioners learn from each other and together.

4. EMPLOYEE MOTIVATION FOR LEARNING

Next to the challenges for line managers and HRD professionals it seems very crucial that employees are motivated to learn. A lack of motivation imposes a serious inhibiting factor to realise the new work practices. An important aspect with regard to motivation is an appreciation of more informal ways of learning and development, and a sense of responsibility for their own learning. It would be worthwhile to explore ways in which this attitude change can be brought about and employees can be motivated for learning on an intrinsic basis (e.g. providing training credits and career guidance). As Chaplin (1993) stated: "Companies should be encouraged to have their in-house programmes validated by appropriate awarding bodies. This will ensure that the quality of the programmes is judged against national or European norms. It will give employees completing such programmes recognition of achievements with value and credibility outside the company." And: "Companies should ensure that

all learning achievements by their staffs are recognised by publicity, appropriate promotion and reward. " (Chaplin, 1993).

5. ORGANISATIONS AND GOVERNMENTS

There is also a role for companies and even governments in supporting a shift towards integration of HRD in companies in such a way that it supports processes of lifelong learning. First, it is important that organisations grow to understand how the notion of permanent learning of individuals and teams has important consequences for the strategies and activities implemented, so that all workers can benefit from this. For public administrative bodies, it is important that strong policies are developed and implemented to support the principles of life-long learning. Policy makers could take account of these changing roles in directing their support for vocational education, training and development.

6. CREATING AN INFRASTRUCTURE FOR LIFELONG LEARNING

In order to create an infrastructure for lifelong learning, co-operation between the different parties is necessary. In order to support learning in the workplace, companies could seek co -operation with higher institutions for vocational education and with universities. If learning initiatives in Europe are to meet the needs of industry, leaders of industry must ensure that their views are taken into account in the design of such initiatives. It is essential therefore that industrialists participate fully in professional, national and European initiatives, to foster and take forward lifelong learning (Chaplin, 1993). Here too, national and European associations of HRD professionals could play an active role in such discussions, as spokespersons of industry.

7. FUTURE RESEARCH

An important theme for future research is the benefit and added value of HRD on the organisational level. This could help the development of HRD as a strategic factor. Furthermore, it would be interesting to study the vision of employees and managers on the issues studied. Empirical evidence on these issues could foster the discussion on HRD tasks for line managers and HRD professionals. It would be interesting to elaborate the country specific differences. Finally, it would be informative to link the study to the national contexts, incentives for organisations and individuals to invest in HRD activities, policy measures taken by the national administration, law enactment in certain fields and the developments in educational systems. This may show further intra-European diversity than has been found in this study. But above all it may explain the diversity to a large extent, and this may lead to guidelines for European policy efforts to improve conditions for HRD in European countries.

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