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Cedefop assists the European Commission in encouraging, at Community level, the promotion and development of vocational education and training, through exchanges of information and the comparison of experience on issues of common interest to the Member States.

Cedefop is a link between research, policy and practice by helping policymakers and practitioners, at all levels in the European Union, to have a clearer understanding of developments in vocational education and training and so help them draw conclusions for future action. It stimulates scientists and researchers to identify trends and future questions.

The European Journal 'Vocational Training' is provided for by Article 3 of the founding Regulation of Cedefop of 10 February 1975.

The Journal is nevertheless independent. It has an editorial committee that evaluates articles following a double-blind procedure whereby the members of the Editorial Committee, and in particular its rapporteurs, do not know the identity of those they are evaluating and authors do not know the identity of those evaluating them. The committee is chaired by a recognised university researcher and composed of researchers as well as two Cedefop experts, an expert from the European Training Foundation (ETF) and a representative of Cedefop's Management Board.

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Interested in writing an article ... see page 86

10 – 20 – 30

A song by Jacques Brel perhaps. 10, 20, 30. The ages of life. The ages of the European Centre for the Development of Vocational Training, Cedefop.

Cedefop is 30, and in very good health. As Maria Eleonora Guasconi notes in her article on the unions and the relaunching of European social policy, published in Issue 32 of the *European Journal Vocational Training*, Cedefop's creation in 1975 was down to the social partners, especially the trade unions, and the perseverance of Maria Weber, a trade unionist in the DGB (the Deutscher Gewerkschaftsbund, or, in English, the German Trade Union Confederation). As early as 1971, the ECFTU (European Confederation of Free Trade Unions), the forerunner of the European Trade Union Confederation (ETUC), had called for 'the creation of a European institute for the scientific study of vocational training' with the objective of 'more intensive reciprocal information on actual experience and the methods and programmes used'. Taking up these calls, the Paris summit in October 1972 came to the conclusion that a European social policy could be created only by 'establishing a common vocational training policy with a view to the step-by-step achievement of its objectives and in particular the harmonisation of vocational training standards, especially by creating a European vocational training centre'. This continues to be the purpose of Cedefop's work, 30 years later, as a reference centre for vocational training in Europe: information on vocational training in Europe, networking of the various actors and partners, study visits, organisation of forums, like the renowned and now unmissable Agoras in Thessaloniki, and support for research into vocational training.

Study visits are now 20 and in equally good health. Integrated into the Leonardo da Vinci programme following the European Council decision of 26 April 1999, the Community study visits programme steered by Cedefop has in fact existed since 1985 as Marie-Jeanne Maurage points out in her editorial in Issue 34 of the European Journal: 'Since its inception, the programme has given vocational training policy-makers the opportunity to exchange information and hold discussions on subjects of common interest at the European level' according to the principle of 'travelling, seeing, understanding'. 'A study visit allows participants to think and discuss from within the country with which the Leonardo da Vinci programme is concerned, rather than from a distance. Visitors can meet important vocational training figures and specialists on the subject under study at the very places where initiatives are implemented, within a multinational and multifunctional group of 10 to 15 people. All of them are players in the vocational training field: administrators at national or regional level, elected local officials, representatives of employers' or employees' organisations, researchers and training organisation managers. This diversity of backgrounds, and therefore of approaches, comes on top of the diversity of national origins to further enrich the debate'.

The *European Journal Vocational Training* is 10 years old and in equally good health. To be exact, it is entering its 11th year in 2005 since it was set up in Berlin, and this year will be exactly 10 years since Cedefop moved to its new home in Thessaloniki in Greece. While it was compulsory to publish a bulletin, under Cedefop's founding Regulation, in January 1994 the Bulletin became a scientific journal independent of Cedefop and the Commission. The articles published in the Journal are subject to exacting criticism and selected by an editorial committee bringing together academic and university researchers recognised by their peers, using a double blind review process. Reviewers do not know by whom the articles that they are assessing have been written, and authors do not know by whom their articles are being reviewed. The Journal, whose aim is to fuel the debate on vocational training in Europe, is aimed chiefly at researchers, policy-makers, practitioners and the social partners. As well as publishing research articles, it seeks to analyse vocational training policies, to present case studies and to look at what is actually happening in the field. Any article covering vocational training, the problems of the relationship between training and employment and the relationship between work and training may be of interest to the Journal. Articles on the Member States and regions of the European Union, the European Economic Area and the candidate coun-

tries are obviously of primary interest to the Journal, although articles looking at universal problems raised by initial and continuing vocational training which draw on experience outside the European area may also be considered by the editorial committee, depending on their significance.

The Journal is particularly proud to be published in five European languages – Spanish, German, English, French and Portuguese – and to accept manuscripts in all the official languages of the European Union, the European Economic Area and the candidate countries. In this way, the *European Journal Vocational Training* offers a European service: the freedom to be able to write in one's own language and the certainty of being read throughout Europe.

Thirty years of expertise that has continued to be built on and shared, 20 years of meetings throughout Europe and 10 years of scientific rigour in the publication of articles: three anniversaries that we would like to celebrate with you and which we would like to dedicate to you, the readers and authors of the *European Journal Vocational Training*, key partners in this day-to-day work to develop vocational training and thus to give every European greater control over their destiny.

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Towards a neo-artisanal production model of bespoke digital services?

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Thinking about the shifts underway which, combined with the spread of the Internet, are affecting both the content of work and the occupational skills required by employers and, more generally, training/employment relationships, leads us to conclude that contemporary societies are faced with the emergence of a new production paradigm. To decode these shifts and give them a meaning, we suggest that this paradigm be interpreted as the emergence of a production model combining a neo-artisanal system with the production of bespoke digital services. This new model, whose prime mover is more economic than technological, is part of the long-term dynamics of deconstruction/reconstruction of the Taylorist/Fordist model and the welfare state, which started in the late 1970s.

Introduction

Researchers specialising in labour and vocational training observe changes in work taking place over time in various countries and attempt to describe these changes, explain them and give them a meaning. The wealth of wide-ranging research in this field is evidenced by the many articles published in France, in the journals *Sociologie du Travail* and *Formation Emploi*, or those published in the *European Journal* for *Vocational Training*. We are also aware of discussions and debates which have arisen over time on technologies as prime movers of changes in work and skills. With variations in different countries, shaped by the empirical situations observed and the prevailing theoretical premises, these discussions and debates continued throughout the 1970s on the Taylorist organisation of work and mechanisation, and took off again in the 1980s and 1990s focusing on trends in work and skills in 'post-Taylorist' enterprises which were then computerising.

These debates reappeared in the late 1990s and early 2000s with the advent of the new generations of 'Information and Communication Technologies' – the famous ICTs or NICTs – in a context of globalisation and growth of service activities (Iribarne, 2001). But the same questions were being asked continually: what changes in work and occupational activities can actually be observed? To what can these changes be attributed? To what extent do they call into question the occupational skills required so far? To what extent are these changes beneficial? Are they rather 'setbacks by progress' – and for whom and under what circumstances? Which policies should be introduced to remedy or, better, prevent them? These questions are especially difficult for theoreticians and practitioners because they are related to the way in which production organisation will be structured in the emerging 'information society' and 'knowledge society' - which, as we know, has become the credo of the European Union since the publication in 1993 of the White Paper on growth, competitiveness and employment, endorsed at the Lisbon summit in 2000 (EEC, 1993).

Faced with the shifts taking place, within and between countries, our intention is not to propose a new 'theory of capitalism' (Boyer, 2004). It is, more modestly, to propose a framework for analysis and interpretation which will allow us to better characterise what constitutes a new stage in the dynamic encounter between technologies and production organisations in our societies. It rests on the notion that this new stage is much more a continuation of, than a breakaway from, preceding stages: these shifts are being brought about by the ongoing deconstruction/reconstruction of norms surrounding markets, employment, work and skills.

To characterise this new stage, our argument takes a twofold 'regulationist' and 'societal' approach. This approach is intended to link 'universals' formed by paradigms and models with 'specifics' formed by the societies that implement them and give them concrete form. Previous research – especially research based on international comparisons – has shown that the economic, technological, organisational and management models which play a part in forming production paradigms should be taken as 'universals' and national societal constructions as 'specifics' ([1]). The whole is built on systemic bases ([2]), while bearing in mind that, as matters stand at present, the overall system is being driven primarily by the 'economic', that the 'social grasps technology as much as technology grasps the social' and that technologies are 'tools re-engineered' by the other two components of the system, chiefly the economic.

([1]) International comparisons show that each society has its own specific ways of constructing institutions and organisations which structure their modes of production and work in particular (Maurice and Sorge, 2000). Moreover, these constructions cannot be understood without taking account of characteristic traits which may be termed 'cultural'. These traits are in practice stable enough to structure the perceptions and behaviour of their members in their social relations and, in particular, in their ways of 'working together' (Iribarne, 1989).

([2]) To take up the perspective sketched out by B. Gilles (Gilles, 1978).

On this basis, our view is that the shifts underway, concerning work, employment and the occupational skills required as well as education/training, can be better understood if they are located in the interpretative framework of '@-production'. In this framework the stress is on a production paradigm shaped by a newly emerging 'neo-artisanal production model of bespoke digital services'. It is linked to the arrival of the Internet in production models in the mid-1990s ([3]) and follows on directly from a previous model with which it is closely related – what may be termed a 'post-industrial model of standard specificity', which started to emerge in the early 1980s and of which it is a further development. As a result, the 'learning enterprise' is appearing alongside the 'lean enterprise'. Similarly, 'knowledge management' is being superposed on 'participatory management', while network approaches, supported by the allegory of the 'dot-com enterprise', are becoming more widespread and more specific.

Production organisation and market norms

Having called this new model a 'neo-artisanal model of bespoke digital services', we must make explicit its features in relation to the terms used to specify it, bearing in mind that these characteristics are linked primarily to market norms.

The term 'bespoke services' is intended to place the stress on the initiative of production activities for which the production of 'service relationships' is the core of their work (De Bandt and Gadrey, 1994). This relationship may be a complement to the production of industrial goods or may incorporate it: such production is in some ways merged with the service relationship. Faced with customers who are tending to elude them, the main problem for enterprises is to obtain a stable competitive edge by winning customers over and keeping them loyal. As a result, they are keen to offer clients bespoke services to give them the feeling that they are in a situation of hyper-choice; in essence, companies are selling the feeling of freedom. This is why we are said to be moving from an economy of diversity to an economy of specificity. At the same time, as pressures on production costs do not seem set to diminish, pressures for a massive 'neo-industrialisation' of services are not about to slacken off either.

The term neo-artisanal is used because the personalised service relationship, though highly codified and mediatised by technical 'artefacts', if it is to function properly, needs to give customers the impression that they are being listened to and that their problems can be resolved in full, even if assistance may be needed. This mirrors the traditional artisanal sector; enterprises are trying to sell their customers the feeling that they exist as separate personalities; the 'trade' approach is re-appearing (Capdevielle, 2001).

The term 'digital' refers to the fact that new generations of information and communication technologies have become the primary support for these services, either as an integral part of the service offered, or indirectly, as support for its production. In practice, they are completely functionalised, in a model which is seeking to shift away from flexibility/adaptability/creativity towards 'fluidity' or even 'liquidity'.

In this model, the most powerful production structures systematically seek to rid themselves of any material assets. They then use these assets in the form of 'inputs', preferably leased in the case of fixed capital or purchased over time in the case of circulating capital. The functions that they systematically keep to themselves, and do not share, are those which make it possible to generate the production of value and to oversee its enhancement: i.e. the functions of design/creation and the control of property rights. Marketing and R&D functions raise many more questions and are more open to partnerships. For enterprises working in the field of materials, the aim is to move closer to the operating methods of commercial enterprises and especially of financial brokerage enterprises, which have only circulating assets or intangible assets - hence the notions of 'hollow enterprises' or 'virtual enterprises' (Ettighoffer, 2001).

In some ways, the model of the high-performance production company is becoming that of the film production company whose existence is embodied by projects following one another over time. The project has the upper hand over the permanent structure, and the company has no assets other than the resources needed for the 'governance' of projects: i.e. the resources needed to supervise their design and achievement in accordance with a set of specifications, and to oversee the enhancement of the own-re-

([3]) There are major differences between what is being said in the literature on the 'e-enterprise' which is being presented almost as a fait accompli and reality which shows a slow migration of previous IT towards this 'e-enterprise' (DARES, 2001).

sources committed. The shift towards disbanding the permanent enterprise thus continues, while the path of steering ephemeral organisations, combining multi-origin and multi-ownership resources, gains ground, giving meaning to the notion of the network enterprise ([4]).

In this model, SMEs continue to grow in power alongside large enterprises: not only do they form a greater proportion of companies, they are actually becoming the main employers. It is therefore here that the future of employment and labour norms is increasingly being played out. In the literature, these SMEs are grouped into two network models which are in widespread competition:

❑ model of the 'network enterprise': this is being brought about by the continuation/completion of the disbanding of the large enterprise which, by 'focusing on its core trade', is further reducing the boundaries of its 'hard core' and the resources associated with it. This kind of enterprise takes a network control stance, operating the network on 'vertical' bases and expecting a return in the form of a maximum enhancement of its own assets as a result of a flexibility/adaptability that it lacked. Its competitive edge lies in its might, enabling it to work in large markets and to make economies of scale in R&D, and in its strategic capacity appropriately to position the entire network in value chains and to find the best business models associated with them.

❑ The model of the 'enterprise network': the aim here is to gain size in order to be able to compete as widely as possible with the preceding networks. In this network, groups of enterprises, generally of small or medium size, join forces on a much more egalitarian basis. These networks derive their competitive edge from their flexibility/adapt ability/creativity in service provision, by pooling their resources, enabling them to make economies of scale while ensuring, through their individuality, local service capacity. These networks are often presented as set up on a geographical basis, taking up the approaches underpinning the industrial districts of northern Italy (Bagnasco, Sabel, 1994)

In both cases, customers are set to be integrated into the networks not just as consumers, but also as co-producers of services as a result of the notion of 'servuction' (Eiglier and Langeard, 1987), especially when the services offered are all 'online services' as is the case with 'e-procurement' and 'e-commerce'. They are considered to be at the core of the 're-engineered' enterprise, in terms of its twofold logic of strategic centralisation and operational decentralisation, listening to and serving their expectations and their needs. In both cases, the technological and technical supports are the same with the same conduits, the same protocols, the same support equipment and the same applications. Similarly, in both cases, control of logistical distribution networks – supply chains – that are equal to the expected services continues to be a key issue. However, the two types of network differ in terms of the ways in which the players are combined, the organisation of their governance structures and the distribution of the value produced by their groupings.

The techniques and technologies used

It has been said that the technical reference system is that of the 'Internet galaxy' (Castells, 2000), i.e. all the 'multimedia' techniques and equipment networked under the 'Internet protocol', reflecting a convergence of speech, data and images in a digital support. In comparison, therefore, with the prior information technology, two details are changing everything: the 'IP' protocol which makes it possible to set up the 'network of networks' and the 'hypertext' link which makes it technically possible to surf these networks using 'search engines' in order to find information uploaded on 'sites'.

However, all the basic equipment - cables, connections, interface supports, software - takes the form of generic technologies and 'cluster' technologies, themselves deriving from electronics, optics, information technology and so on, the overall package being called NICT to distinguish it from previous generations (Caron, 1997). This equipment can be used for multi-purpose information and communication or transaction applications. It may also support workflow to automate data processing procedures as well as websites, forums and various supports for cooperative work. It may also support migrations of e-mail and EDI (electronic data exchanges) already operational in proprietary networks of the previous generation.

([4]) An important feature of the network enterprise is the lack of association between its legal boundaries and its technical and economic operating boundaries, making it very difficult to pinpoint where it starts and where it ends. Determining its boundaries is becoming even more dependent than before on the conventions used.

The most significant development lies perhaps in the architecture of networks and the information systems that they support. In contrast to the previous generation, where they were specific to each enterprise, organised more in line with the main enterprise functions and more focused on technical and management functions related to production, these new systems and the applications associated with them are much more 'transverse' even though they continue to be called by their functional fields of application: e-commerce, e-procurement, e-learning, etc. ([5]) The main vocation of this information technology's 'integrating transversality' through Intranets and Extranets combined with databases is to organise the information systems of enterprises so that they form the backbone of 'enterprise networks' and 'network enterprises' through transverse coordination. It is for this reason that, over and above individual applications, the main software suppliers are selling integrated packages with two complementary orientations which ultimately meet up with one another: 'ERP' (Enterprise Resource Providers) geared to 'back office' management and 'CRM' (Consumer Relationship Management) geared towards the commercial through 'customer relations': marketing campaign management, sales aids, call centre management, etc.

Lastly, the interface supports - chiefly PCs and telephones - are starting to become more mobile, making it possible, through 'roaming connections' to extend the enterprise's boundaries to personnel on the move.

Labour and employment norms

Whereas the previous model tends to make labour and employment norms more diverse, this model, in a reverse and complementary movement, tends rather to unify them around work stations seen as technical supports for economic and social 'network nodes' (Benghozi et al, 2000). The technical work station becomes the universal support for occupational activities, whatever their legal status, function and hierarchical level. The trend toward homogenisation is taking place in both the temporal and spatial dimension.

From the point of view of employment norms, the 'enlarged net company' looking for profitability based on 'liquidity' tends to combine organisational and legal dis-integration with technical and economic integration. Being able to work with others while elsewhere ('distance working'), the reduction or elimination of the need for physical presence, 'intra-trade' project organisation, and 'itinerant' operation, are promoting a whole range of forms of 'teleworking'. They are also associated with clusters of 'independent, responsible and entrepreneurial professionals' ([6]), this occupational autonomy-responsibility-entrepreneurship bringing employment closer to self-employment. There is little to prevent this trend from being mirrored by a shift from waged to self-employed status - and this may signal the return to 'precariousness for all' ([7]).

From the point of view of labour norms, the technical work station, as a mediatised support for coordination/cooperation underpinning the collective organisation and its efficiency, is becoming the pivot of the new working conditions as a result of its reliability, the ergonomics of its man-machine interfaces and operating methods and its multiple network connections. The 'mouse' and the 'double click' seem set to become the source of a new generation of occupational diseases ([8]). Similarly, as work is increasingly being organised in the form of independent projects, the technical work station is becoming the priority place for conflicts of priorities which are particularly difficult to manage when they are subject to the increased constraints on timescales for action brought about by interactivity and the contraction of production deadlines. The anxiety generated by time pressures is therefore supplementing the anxiety of 'precariousness': taken together they are leading to stress on a mass scale (Lasfargues, 2000) ([9]). Lastly, the technical system is becoming the preferred mode of supervising activity - it makes it possible to find out online, at any time, not only working time but also what stage has been reached with the work handed out and what operating methods have been used to achieve it. The fear of supervision is therefore becoming generalised. More globally, transparency and what it means is an issue for everyone ([10]).

In some ways, the typical 'e-working' profile is that of a technician in a call centre with intermediate or higher technical skills, such as someone working in 'customer assistance'. The technician's role is to be able to provide, as rapidly and accurately as possible, replies to questions asked, whether

([5]) In industry, the shift is towards design through modelling and 'virtual design' enabling 'concurrent engineering' networked around a basis common to all the players involved.

([6]) Used here in its broad sense, i.e. not limited to work 'at home'. It therefore provides the possibility of specific forms of 'non-localisation' of occupational activity.

([7]) This feeling is exacerbated by the fact that enterprises wishing to be more strategic are being led to work more on the boundaries of their activity, by buying as well as closing or selling subsidiaries, establishments or departments. This creates more insecurity, which is associated with a feeling of reification of occupational activities.

([8]) The 'double click' is said to cause problems with the hands, wrist, elbow, shoulder, neck and vertebrae. According to B. Valdires, an osteopath specialising in joint problems linked to occupational activities: 'in the history of work, man has never been exposed to such light but repetitive movements', cited in P. Gilly, Double clic, danger public? France TGV No. 44, May 2002, p 12.

([9]) More generally, advances in medical research are increasingly highlighting the interdependences between 'psychosomatic' disorders and 'functional' disorders such as cancers. There is no reason not to think that the new labour and employment norms will produce, in the future, new diseases which are of occupational origin (Iribarne, 2004).

([10]) The extent of the legal problems associated with these issues is well known (Ray, 2001).

these are requests for information or for technical help. For this purpose, he uses his own expertise assisted by the information system which he can access via his computer and possibly also back-up expertise (Institut des Métiers, 2001). He therefore works in a 'neo-artisanal model' since he has to be able to reply to the customer's question in an autonomous way, by mobilising all the 'expertise of his trade'; but at the same time he is entirely controlled by a technical system which guides him and records his activities in real time, in terms both of duration and procedures followed.

More precisely, these technologies are significantly blurring the reference boundaries of 'Taylorist' work constructed around the space/time relationship and the specialisation associated with them - work, leisure, training - and are tending to deprive the 'standards' set by legislative and contractual working times of any meaning (Institut Chronopost, 2005) ([11]). The most novel aspect of the NICTs is that in places where opposites, i.e. exclusives, were combined: centralisation or decentralisation, autonomy or supervision, intensive or extensive, etc. - these technologies make it possible to combine associations, i.e. inclusives in the same way as exclusives.

The 'e-organisation': potential associations

- ❑ Competition and cooperation;
- ❑ strategic centralisation and operational decentralisation;
- ❑ independent operation and online supervision;
- ❑ stable procedures and unstable processes;
- ❑ predictability through scrutiny and unpredictability through instability and strategic mobility;
- ❑ short term and long term (cost control by daily reporting and strategic policies)
- ❑ intensification of time and extension of time (synchronous and asynchronous)
- ❑ intensification of place and extension of place (here and elsewhere or the gift of ubiquity).

Required occupational abilities - hybrid knowledge

Together with these changes in the economic and social benchmarks of production, as well as the tools supporting production activities, the hierarchy and the content of knowledge are also being called profoundly into question: the knowledge formerly required is being largely recomposed by hybridisations (Zune, 2003; Orgogozo, 2004). New generic requirements are appearing in the form of 'required abilities'. These new requirements conventionally include the use of techniques and the relationship between the ability to use techniques and job skills. 'Behavioural' expectations are also appearing, however, in explicit and new ways in relation to 'cultural' aspects and, over and above social norms, psychophysiological attributes. These new requirements have less to do with problems of mastery, connected with the dissemination of the new generations of ICTs, than with requirements formulated in terms of mastery within the framework of the above-mentioned production constraints. Together, these requirements represent a unifying principle as regards this new model, as they are being formulated for all occupational activities, whatever their levels, nature and places of performance.

Knowing techniques and their uses. The massive and widespread dissemination of these technologies to all forms of work means that they absolutely have to be learnt. The need for familiarity with these techniques and mastery of their use at a relatively high level is due, on one hand, to their relatively limited reliability and, on the other hand, to the tightening of production constraints ([12]). However, as these technologies form a system with the older technologies that predated them, learning how to use them cannot take place without their systemic reinterpretation. In practice, this means that a knowledge of the areas in which the different technologies available can be relevantly used in terms of the work to be performed is becoming the basis of occupational skills in this area - rather than simple conventional skills in manipulating these technologies.

Job skills. From a professional point of view, the ability to use these technologies is nevertheless less essential than job skills. In prac-

([11]) This construction is the basis for the legal forms attached to work since it defines the places and times of work, and the rights and duties associated with it. This is perhaps where employment and labour standards may be most destabilised by the NICTs.

([12]) The technical abilities discussed here do not take the form of traditional skills in electronics in relation to hardware, or IT knowledge of the programming type, but are systemic skills. They make it possible to understand the 'parameters', where the system may be constituted of the computer and its program library or, more formidably, the computer and its connection networks. The need for these abilities regularly arises at the time of installation and 'configuration' of the system. It also arises every time one or other component of the initial configuration is modified or every time a problem appears during operation: What kind of problem is it? Is it the result of an incorrect manoeuvre? Is it a crash? Where is it? What do I have to do to solve it? All questions that the user asks with even more apprehension if he cannot call on a local environment possessing the required abilities.

tice, the relationship between generic techniques and jobs is twofold. On the one hand, techniques are used in contexts which may be extremely varied, depending on the jobs of which they are part. On the other hand, they are an integral part of the content of jobs which are themselves being changed as a result of developments in the products/services placed on the market and as a function of the tools and organisational methods mobilised to produce them. Thus, their dissemination contributes to the dynamics of jobs. Contrary to popular opinion, however, basic job skills remain remarkably stable. Developments are much more likely to take the form of reconstructions and hybridisations of existing jobs than of the ex nihilo creation of new jobs based on new knowledge and making 'old' knowledge 'obsolete' (Dauzin et al, 2000; Iribarne and Tchobanian, 2003). The key factor here is that the relationship between usage abilities and job abilities, as a new stage of reconstruction of old jobs, is becoming a major source of confusion of the traditional benchmarks of training and employment counselling. In practice, both the contents of activities and their names lose meaning as the correspondences between them become looser.

Behavioural skills. These are a new component of the required abilities that are being grafted onto other abilities because of the specific problems raised by NICTs when they serve the managerial desire for integrated cooperation in extended networks which go beyond the traditional boundaries of services, enterprises and states. Communication is primarily an anthropological phenomenon; communication tools come up against cultural incomprehension whether in different job worlds or, more broadly, in different countries or cultures (Iribarne, 1998). Knowledge of, or at least the ability to understand, another's world is thus becoming a key component of occupational skills. This ability is not, however, sufficient, as cooperation happens within generalised, strong competition: what is therefore necessary, within competition, is to be able to 'cooperate loyally' while accepting the continual 'challenge of the other' ([13]).

We need to take our examination of behavioural requirements further in relation to what we said about stress. Occupational activities today are unstable and unpredictable, framed by changing relational worlds and generating perpetual conflicts of interest and priority. The ability to cope with this kind of situation then becomes a generic competence as well; all applicants for jobs may be required to possess it.

Required individual behavioural capacities

❑ To be able to find, select and analyse information in order to decide under major time constraints;

❑ to be able to prioritise information and constraints;

❑ to be able to classify information so that it is accessible at all times;

❑ to be able to work effectively, and multi-task on several issues at the same time;

❑ to understand the relation between deadlines set and resources allocated as constraints in formulating one's work.

Required collective behavioural capacities

❑ To be able to cooperate with a variety of people, without the need for moderators;

❑ to be able to perceive one's place in the collective organisation;

❑ to be able to inform/report with discernment;

❑ to be able to impart one's own knowledge to other people in ways that are useful for them.

Education/training and certification

Just as in other production activities, institutions responsible for education/training are not only being affected by the paradigm shift we have examined in respect of service provision, i.e. producing the required abilities, but also in terms of their production organisation - through at least three of the fundamental dimensions of these changes: cooperation/competition, which is spreading to all establishments and is reflected by the formation of national or supranational alliances/consortia (Iribarne, 2002), 'liquidity' which is reflected by the stress being placed on 'lifelong learning' (Iribarne, 1996)

([13]) It is not by chance that we are witnessing a rhetoric of sporting competition throughout the HRM world which echoes the war rhetoric in the business world. The aim is to create a sort of 'soft' and ultimately rather cynical mediation between the players who have an interest in understanding that it is in their interest to cooperate to improve their collective performance and, thereby, their individual performance.

and 'virtuality' with e-learning and distance learning (Kreher, 2001; Formation professionnelle, 2002; Pollmann, 2004).

The learning enterprise. In connection with the NICTs and their uses, the desire of employers to dismantle the Taylorist/Fordist model together with their keenness to speed up the introduction of a new production organisation with the properties sketched out above, is leading them to stress 'knowledge management' and 'e-learning' in order to promote the creation of a 'learning enterprise', i.e. an enterprise which is constantly able to co-produce 'outputs' of services for customers and 'inputs' of production skills through individual and collective learning (Centre for Educational Research and Innovation, 2000; Dierkes et al, 2001). Their aim is therefore to specify, in connection with the production of 'e-services', the production abilities deemed necessary for production, to make them an integral part of operations, and continually to renew their competitive edge.

Certifying knowledge and acquired occupational abilities. From this point of view, it is logical that the certification of knowledge acquired through training courses by State-recognised certificates is also being called into question. There are increasing demands to take part in processes and to be players in assessment and the recognition of acquired learning. On the one hand, there are demands for the certification of acquired occupational abilities by 'third-party certifiers' who are felt in practice to be more rigorous in their assessments of both training institutions and training contents or acquired knowledge and abilities ([14]). On the other hand, demands are also being put forward by enterprises which want to be included in the assessment of acquired abilities.

More globally, this questioning is the result of a shift towards 'competences' within the reference system of the 'qualification universe'. Certification of skills expressed in terms of competences is in practice being shifted in two directions: from schools to workplaces and from teachers to the managers of occupational activities. The view of enterprises, as mentioned above, is that they no longer believe in 'knowledge' which is too fixed to cope with the mobility of the world. Instead, they want to be sure that that they 'can recover in practice' the results of investment in training. Companies feel, in fact, that they are best placed to assess the pertinence and validity of the knowledge acquired within production activity, while unions dispute these claims or demand to be included in the process, in the name of avoiding arbitrary judgments. ([15]).

The status and remuneration of knowledge. We feel there are three key factors here. They are:

- the desire to downgrade the status of knowledge felt to be 'fossilised', which is continually outdated, in favour of operational skills which can be continually put to use in immediate production processes;
- the desire to pay for these competences only if they are effectively mobilised in identifiable production processes whose individual results can be evaluated;
- the desire to pay for work only when it has been possible to put this work to use in product or service markets.

According, therefore, to the well-known approach of analyses conducted in terms of human capital, the return on education – what is commonly known as the 'payback' of training – is becoming a key factor in its evaluation. As a result, there is a tendency in favour of individualised pay.

Social compromises and 'e-regulation'

Lastly, and even more generally, the changes taking place in rules, procedures and norms are destabilising the social compromises which, throughout the major changes of the 20th century, paved the way for the emergence and consolidation of modern forms of employment. This destabilisation is affecting public power by calling into question the welfare state. This tendency is being reflected internationally in the reduction of the boundaries and the legitimacy of state intervention. Free trade agreements seek to equate national laws guaranteeing social protection with attacks on free competition (Arnaud, 2004). Nationally, it is reflected in the desire to give a greater place to industrial relations, seen as the pivot of collective regulation of the Fordist wage relationship, via their role in the production of rules and norms (Le Goff, 2004). In both cases, laws and regulations now tend to play less of a role than agreements and contracts.

([14]) This reflects an extension to the field of education and training of the more global phenomenon of certification, which started in the quality field with the ISO 9000 standards then moved on to the environment with the ISO 14000 standards.

([15]) This trend also reflects another aspect of a return to the artisanal model. In this model, the unity of the place and time of training and work predominated, and the skills acquired were validated and certified strictly within the framework of the professions, albeit organised as guilds.

Industrial relations are also being called into question, in terms of how their levels of regulation of set up, what methods and content govern bargaining, and which actors can take part in drawing up rules. In the European Union there is a twofold move away from central collective bargaining whose legitimacy is tending to decline. In the name of greater flexibility and better linkage with the situation in the field, the first shift, for which employers are pressing, is towards companies and their establishments, and, under the influence of the federal state model, towards local authorities (Jobert, 2000; Tallard, 2000) ([16]). In the other direction, European integration is causing a shift towards the supranational.

Cyber-unionism, whose appearance reflects the emergence of the Internet in industrial relations, is itself a new development in collective bargaining and is raising questions at various levels. The development of new information and communication media brought about by the Internet, with its e-mail and websites, is making the traditional trade unions think about the ways in which they inform their constituents. Mobilisation in the event of disputes is another area, especially with the emergence of 'cyber-disputes'. New players are appearing, gate-crashing regulation processes and thus calling into question the monopolies of the conventional bargaining players – i.e. the unions with an elected mandate – as well as the places and methods of disputes. More generally, as a result of the extension of traditional 'occupational unity organisations', self-proclaimed representational groups are appearing which, focusing increasingly on the Internet and the 'global network', are turning into self-appointed representatives of the grass roots. These players are trying to shift the locus of action by taking them outside the enterprise to the market place. They are trying to involve new players in the game – for instance consumers or customers – with the common objective of changing the relationships of strength in bargaining. The web and the voluntary sector are thus becoming the platform for demands for a different democracy: a participatory democracy that is felt to be more representative ([17]).

The @-enterprise and the production paradigm, termed globalisation, with which it is associated, are causing our post-industrial societies to make spectacular shifts away from the paths they followed in the last century. These shifts started in the late 1970s when the balance of power shifted away from suppliers and towards customers. They continued in the 1980s and 1990s when these about-turns extended to providers of capital and away from providers of labour. At the dawn of the 21st century, a generalisation of the market economy is that it is trying to gain the upper hand against the backdrop of a deepening of Smith's model modernised by Schumpeter's model: the model of creative destruction (Smith, 1991; Schumpeter, 1965). Even more fundamentally, the model of liberal democracy along the lines of the English-speaking world is being proffered as a universal point of reference (Weber, 1987), a model revisited by the ICTs with the typical figure of the 'middle class' as the social ideal of accumulation and distribution of wealth (Sombart, 1966; Ponteil, 1968; Granou, 1977) ([18]) .

Conclusions

Our aim, through this exercise, is to put forward a paradigmatic construction equivalent to what was done in the past for Taylorism and Toyotism - one as a production paradigm of 'standard industrial mass production' and the other as a paradigm of 'post-industrial production of standard specificity'. We feel that the main feature of this new paradigm is that it is widely based on competition and on risk and uncertainty (Beck, 1992). In this world of cutthroat competition, everyone is required to work with everyone and to compete with everyone. Moreover, in this world of risk and uncertainty, no one can promise anyone anything. Everyone has to accept a more fragile situation as a result of the precariousness of the social link, a fragility which extends beyond the sphere of work to affect family life. (Sennett, 1998; Supiot, 2004). In gaining access to unequally distributed wealth, only the 'fittest' are likely to win, while the leading positions are continually up for auction as a result of the play of innovation. Logically, no person and no institution should escape this model of required performance, not even the actors and institutions of education/training (Iribarne, 2002). The typical model of the high-performing individual offered as a corollary is that of the artist (Menger, 2002), or the sportsperson in the 'Top 10'.

We believe that formulating a framework for this kind of analysis and interpretation is indispensable if we are to understand what is

([16]) This comment probably applies more to France where the importance of the central state is well-known.

([17]) It is also possible to see these shifts at a global macro-regulation level with the organisation of the 'anti-globalisation' demonstrations at the various meetings of the WTO or the G7, G8 and so on, in Seattle, Genoa, etc., or at the 'alternative Davos summits' in Porto Allegre. They were also to be seen during the Danone disputes when a pirate site, counterfeiting the enterprise's site and inviting consumers/customers to boycott the enterprise's products, was set up. See on this subject J.-E Ray, op cit., pp. 177-239.

([18]) Or, more precisely, the liberal model which emerged in Calvinist Britain and which set itself up as a 'universal' doctrine. Historically, France has tried to take it up and implement it at various times without ever managing to do so (Jaume, 1997).

currently happening in the EU Member States, with their tensions and issues. This is just as true of changes in the 'quality' of work as of the transition from qualification to competence and the shifts in the occupational abilities required by employers (Oiry, 2004) or, lastly, of the content of training and adjustments in training/job relations. It is only when we relate the dynamics of models and paradigms to societal constructions that we are able to understand what kinds of changes are underway in the various countries, and the difficulties that they are encountering or causing. This applies just as much to management practices at the micro-industrial level as to public policies at the macro-social level.

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Expansive learning: benefits and limitations of subject-scientific learning theory

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One critical learning theory that has survived is once again being acclaimed. Subject-scientific theory requires learners to be taken seriously. Their reasons and resistance need to be brought into the open. This requirement was too radical for schools since it does not allow a fixed syllabus. It has borne fruit, however, in continuing education.
Some of the core concepts are outlined, namely expansive and defensive learning, together with the underlying discourse. Well-known criticism is then reviewed, such as the use of Foucault's analysis of power and the complete absence of informal learning. Links with constructivism, habitus theory and gouvernementalité, which have been discussed at conferences, are used to examine the scope of the theory. Critical psychology was long ignored. During the Cold War it had adopted too radical a position to be accepted by that generation. A second generation of educational researchers is today using the insights offered by its concepts in empirical studies, while adopting a discriminating approach to the theory. It is increasingly being applied in practice, although translation for use abroad is still in its infancy.

The European Union has set itself the objective of becoming the most competitive and dynamic knowledge-based economic area in the world by 2010. Priority is therefore being given to lifelong and life-wide learning, which 90 % of EU citizens regard as having at least some degree of importance according to the latest Eurobarometer survey (Cedefop, 2003, p. 5). These views are also reflected in the holding of central economic forums. The 2004 Zurich Congress of the German, Swiss and Austrian associations of educationists, for example, is entitled 'Education throughout the Lifespan' ([1]). It thus explicitly recognises the relative importance of continuing education by comparison with school and university. One of the topics to be discussed is 'learning', or to be more precise, the term expansive learning. A working group under the same name is looking at the benefits and limitations of so-called subject-science (published in Faulstich, Ludwig, 2004). What lies hidden behind this term? Why has it now been more widely accepted? These questions are intended to open up what has been a (sometimes excessively) German theoretical debate to European discussion. Here I examine particularly the critical papers reporting on the benefits and limitations of subject-scientific learning theory. I argue that a second generation of discussants of expansive learning and the subject-scientific learning theory underlying it will set the tone in the 21st century ([2]).

Basic concepts: expansive learning and the logic underlying it

What is expansive learning? The best explanation is given by the creator of the concept himself, Klaus Holzkamp (see Box p. 19). The idea of subject-science is described especially accessibly in an interview which Rolf Arnold conducted with him. This interview has recently been republished (Faulstich/Ludwig, 2004).

When asked about his conception of learning, Holzkamp answers: 'According to current ideas, learning takes place if the learning process ... is initiated by a third party.' Holzkamp then refers to what he calls the 'teaching-learning short circuit' which runs through the study of education and says that where something is taught, it appears that it must also be learnt. Is this the case? Holzkamp continues: 'I take the view, however, that intentional, planned learning only occurs if the learning subject himself has reasons to learn' (Holzkamp, 2004, p. 29). Here lies the change of paradigm which makes the concept so attractive: the key to learning does not lie on the teaching side. Learning is not improved by improving teaching. Even the most perfect teacher finds that learners cannot be manipulated: we cannot generate or plan learning, it is always up to learners themselves whether they either change their ideas or decline to learn what they are asked. From the perspective of research and as an object of academic study, learning is thus also to be conceived from the standpoint of the subject – the learner. But why should anyone learn anything unless obliged to do so by teachers or educators? In the interview, Klaus Holzkamp argues: 'Learning always occurs if the subject encounters obstacles or resistance in carrying out his normal activities' (Holzkamp, 2004, p. 29). It is apparent here that practical interest contributes to learning motivation. Jean Lave and Etienne Wenger would agree. Their highly respected notion of community of practice is precisely one such learning interest. Participation is in fact a rea-

([1]) The Congress 'Education throughout the Lifespan' was held in Zurich by the German Society for Educational Science, the Swiss Society for Research in Education, the Swiss Society for Teacher Training and the Austrian Society for Research and Development in Education (http://www.paed-kongress04.unizh.ch/home.html).

([2]) Some help with translation of the theoretical terms into English is to be found in the abstract and in a Powerpoint presentation based on the so-called 'Learning Book' of 1993 at www.lernsite.net or www.anke-grotlueschen.de

son for learning: ultimately 'I' learn because 'I' wish to be part of the community of practice (see Lave, Wenger, 1991 and Wenger, 1998). This idea is closely related to Holzkamp's problem of action (Handlungsproblem). That is not surprising because Lave and Holzkamp exchanged creative ideas (see Forum Kritische Psychologie No 38). But if there is already a widely known and accepted learning theory in the field of open and distance learning which places the learner at the centre ([3]), why should we bother with another fifteen hundred pages of hard-going literature? What is so special about expansive learning and what does the 'subject' mean in 'subject-science'?

Key terms and paradigms

Expansive learning means: 'I' learn on the basis of my action problem what I need to learn to pursue my activities and to expand my options for action. In order to clarify the term further, it is worth looking at the opposite extreme, namely defensive learning: if I learn defensively, I only do so because I see a threat to my existing world and can react in no other way than by learning. Is this a problem? Yes, and it is familiar to each of us. Everyone knows that defensive learning is not effective. We benefited from many years of language teaching at school and yet retained little of all that Russian, French or Spanish. However, we can learn a language remarkably swiftly if it has some connection with action. Why is defensive learning so ineffective? Subject-science is still the only learning theory providing a concept to cover this situation: defensive learning amounts to a lot of boring copying and rote learning which is promptly forgotten. In somewhat more abstract terms, it comprises anything which serves 'to prevent teachers from imposing punishments, to satisfy them, i.e. to demonstrate or even give a semblance of learning' (Holzkamp, 2004, p. 30). We can thus appreciate and understand expansive learning by contradistinction to defensive learning.

Subject-science also contains a breakthrough in epistemology. It turns away from the cause-and-effect models which predominated from behaviourism (Skinner, Watson) through to cognitivism (Bandura, Bruner) and finally the cultural history school (Vygotsky, Leontyev, Galperin) and are still partially implicit in yet more refined versions in constructivism (Maturana, Varela). What is meant? The theory of the subject states that scientific explanations need to be thought through from the standpoint of the subject. That means that researchers must put themselves in the position of the subject. From the subject perspective we can then understand ([4]) why someone learns or does not learn. It is possible therefore to enquire into the reasons and not merely to be content with the conditions from which it is hoped to be able to predict learning. Are reasons and conditions so different? An example will make clear what is at issue: a person reads the newspaper rationally when he or she wishes to know something about the world. This connection is reconstructed on the basis of a logic of reasons, and it is generalisable. It refers, however, to living beings with intentions and plans. If we speak of plants or matter, the syntax does not work: an apple falls to earth rationally when it is dropped? The sentence is grammatical nonsense. We see that nature functions causally, in cause-and-effect structures, without rationality but according to laws. The structure of the liberal or social sciences is easier to explain, however, if we involve rationality and emotion (unfortunately we lose the natural laws).

This perspective of understanding is not new in the history of science. It became familiar through Wilhelm Dilthey, reference to whose theories is explicitly rejected by Holzkamp, incidentally (Holzkamp, 1997, p. 260 and p 350). Peter Faulstich currently makes the connection when he looks beyond the controversy over understanding in the liberal sciences versus explanation in the natural sciences: 'If we look more closely, Wilhelm Dilthey's hermeneutics is also (...) not a method of interpretation but relates essentially to the issue of the constitution of the liberal sciences when confronted in the second half of the 19th century with the growing hegemony of the natural sciences' (Faulstich, in preparation). In brief that means that where Dilthey and subject-science agree is in defining the world and its theory as changeable and historical. There may be - and no doubt will be - further argument over this connection.

In summary we can extract two core pairs of terms from subject-scientific learning theory: expansive and defensive learning direct the attention to the problem of action and the learner's learning interest and address the short circuit between teaching and learn-

([3]) The debate about learning is currently matched by a comparable paradigm shift in the debate about quality, which is put forward for example in the paper 'Qualität aus Lernersicht' (quality from the learner's viewpoint) by Ulf Ehlers in the *European Journal Vocational Training* No 28. ArtSet in Hannover (artset.de) is an institution which has taken up the subject-scientific approach. An instrument to measure quality of education from the learner's viewpoint is currently being developed there (artset-lqw.de).

([4]) Accordingly, a current book on learning and organisational theory by Joachim Ludwig is called 'Understanding learners'.

ing. The second pair of terms, logic of conditions and logic of reasons, refer to the subject of learning, that is, the person who is learning, and to his or her declared and secret, conscious and unconscious, scurrilous, irrelevant, noble and ambitious reasons, hopes, fears and non-manipulability.

Critical psychology

A whole series of publications appeared on subject-science before the first major work, Holzkamp's Foundation of Psychology (Grundlegung der Psychologie, 1983). A bibliography can be found at kritische-psychologie.de, which also lists which subject-science texts have currently been translated into English. The first generation of subject-scientific theoreticians and practitioners discovered through lengthy argument how difficult it is to change paradigms. The second major work by Holzkamp, *Learning* (*Lernen*, 1993), faced fewer difficulties. It may be widely ignored in German psychology, but it goes to the heart of education.

In fact the so-called 'Learning Book' has already found its way into general textbooks on education (Gudjons, 2001, p 230). Here too, however, the radical criticism of schools contained in the Learning Book makes it difficult for many people to accept it. It is therefore largely vocational and continuing education that has taken up, criticised and pressed ahead with the development of subject-scientific theory. Rolf Arnold (1996), for example, attempts to link it to his concept of enabling didactics, on two premises. He calls on both moderate constructivism and subject-scientific theory, and uses its concepts to criticise the teaching-learning short-circuit. The book on constructivist adult education by Rolf Arnold and Horst Siebert (1999, p 5) acknowledges subject-scientific learning theory, and Siebert (2003, p. 317) has now produced links between these theoretical systems, which used to provoke controversial debate (Grotlüschen 2003, p. 35 et seq.).

Peter Faulstich uses another concept – mediation didactics – to reconsider the role of teachers: their task is to mediate between learning content and learners, or in other words, to formulate reasons for learning (Faulstich, Zeuner, 1999, p. 52). Besides theoretisation, subject-scientific systems of categorisation are also used in a number of research papers on e-learning (Patricia Arnold, 2001 and 2003; Grotlüschen, 2003). More recent theoretical discussion of e-learning, driven by Gerhard Zimmer, is also concerned with subject-scientific paradigms (Zimmer, 2001).

Christine Zeuner and Peter Faulstich are currently producing an overview and setting the topic in the wider context of 'subject-oriented adult education research'. They have succeeded in particular in making connections with the long historical tradition of biographical research (Faulstich, Zeuner in preparation).

To sum up, it is possible to identify a second generation who are turning to subject-scientific theoretisation from a background of education, and specifically adult education, with particular reference to virtual learning.

Theory in the shadow of the Berlin Wall

At the outset I suggested that subject-science is discussed largely in the national context. Specific historical events are partly to blame, and are still associated with it even though they only affect the discussion implicitly. In order truly to pass on the development of concepts to a second generation, building on the Zurich discussions for instance, I believe it would be sensible to jettison some national ballast. Continuing education practice in France, Belgium and Norway has already drawn closer to learning concepts which point to meaning, sense and interest as recurrent motifs in successful learning. In my view it is time to offer these close allies a theory which sees learning from the subject's standpoint and explains the business of meaning in the context of learning success. But back to history.

Critical psychology - as this direction of theory has been known since 1971, when the Psychology Department of the Freie Universität Berlin was split - grew up as a direct response to the student movement, the interpretation of Marx and the Cold War, within view of the Berlin Wall. A working group came together in a geographical enclave surrounded by the GDR. It was joined by Frigga and Wolfgang F. Haug, and published jointly with the 'Projektgruppe Automation und Qualifikation (PAQ)'. The editors of the 'Forum Kritische Psychologie' are still among the national discussion partners (the editors of the 1997 special issue on 'Learning:

Holzkamp-Colloquium' were: Ole Dreier, Frigga Haug, Wolfgang Maiers, Morus Markard, Christof Ohm, Ute Osterkamp and Gisela Ulmann).

Critical psychology had to compete with Marxist tendencies in finding a justification for a separate subject theory, and had to negotiate the justification for an understanding-hermeneutic research method with empirical-analytical psychology. In this process many distinctions were made which appear surmountable in the present-day historical situation – particularly if we think in terms of the international level. Over many years of constructive discussion, the Berlin Group moved closer to Jean Lave (University of Berkeley) and Ole Dreier (University of Copenhagen), and to Charles W. Tolman (University of Victoria, Canada).

The opening-up of the GDR and the collapse of dictatorial 'Realsozialismus' have now cast a latent ideological shadow over critical psychology in Germany, although the baby may somewhat over-hastily have been thrown out with the bath water. It is now the task of a second generation to disentangle the sustainable theoretical concepts from the argument over methods and the Cold War in order to extract the essence of subject-science, and specifically of its learning theory, so that this can enrich the European debate.

Current reappraisal, criticism and links

Any renewed acceptance and criticism in a contemporary context of a theory that has become a school invariably involves reappraising and expanding it, and forging links. In order to escape the threat of ossification, the old must always accommodate new discoveries, for else it will become no more than a dogma to be learnt by rote (Dewey, 1989, p. 80, original 1920). Mention should therefore be made of some links and counter-arguments.

Even when the Learning Book was first published, Holzkamp's incorporation of Michel Foucault's analysis of power was questioned. It does indeed appear difficult to see Foucault's 'Control and Punishment' (1975) as being within the Marxist tradition (Holzkamp, 1997, p. 273). It is appropriate at this point to consider Michel Foucault's subsequent works up until the mid-1980s. The relationship of the individual to society appears to be a matter for constant criticism: on the basis of the further development of Foucault's theoretisation, namely the 1984 *Governmentality Studies* (Lemke, 2000), Hermann J. Forneck demonstrates that Holzkamp clearly assumes a subject who acts at least partially independently of society (see Forneck, 2004, p. 258). The criticism by Frigga Haug tends in the same direction, calling for greater cultural, social and historical contextualisation of the concept of the subject (Haug, 2003, p. 28 et seq.). A second line of criticism by Frigga Haug relates to the distinction between Holzkamp's learning theory and unintentional, unconscious learning (Holzkamp, 1993, p. 184 and Haug, 2003, p. 27). While Haug agrees with Lave (1997) in pleading for an expansion of the concept of learning – which offers further links with 'informal learning' and 'implicit knowledge' (Polanyi, 1985) – my own plea goes in the opposite direction: I regard it as desirable to make learners more aware of their (implicit, informal) learning processes in the best Enlightenment tradition, thus also giving them increased self-learning competence (Grotlüschen, 2003, p. 310 et seq. and 2004, p. 14 et seq.).

In general terms, it is very difficult to stress the 'subject' in an age in which individualism has become debased into a neo-liberal ideology. It might be contended that critical psychology always pointed to the social contextualisation of the subject and the mediation of meanings by historical processes, even to the extent of Feuerbach's 11th Thesis, if that is not going too far. But there is still some obvious unease throughout the schools of theory. Jürgen Wittpoth looks at another theory, again French, and examines its links to and differences from subject-science: this is the concept of habitus drawn from Pierre Bourdieu (1987). If it is assumed that habitus is essentially an unconscious phenomenon which strongly influences subjective actions, then the question arises as to how the subject can recognise his or her own interests. May custom, environment and habitus not distort the subject's view? From this perspective, the learner may be under a delusion about his or her interests, or may simply be perplexed (Wittpoth, 2004, p. 266). This raises once again the question of the relationship between the learner and society.

Overall, the acceptance and reappraisal of subject-scientific theory by a second generation is again leading to constructive debate

about autonomous (Otto Peters, 2004), self-directed (Faulstich, Gnahs, 2002) and indeed expansive learning. The key point remains, however, the requirement that society and the individual be perceived as being in a relationship of mutual exchange, so that learners can for example influence the content of what they learn from virtual learning, and teachers can refer to organisational and societal demands, such as employability.

Klaus Holzkamp *was born on 30 November 1927 and died on 1 November 1995. He took his higher doctorate in 1963, gave his inaugural lecture in 1963 and was appointed lecturer in psychology at the Freie Universität Berlin in 1967. The student movement began at around the same time, and with it, the call for socially responsible academic research. Holzkamp had no hesitation in learning from students inspired by Marx. The outcome was a project entitled the 'Red Freedom School Shop': the shop opened in 1969 in response to demands from students, and under the academic control of Klaus Holzkamp. The project ended in a television broadcast in 1970. In the estimation of a fellow proponent and academic, Ute Osterkamp, this experience of failure demonstrates that 'good will' alone is not enough and that other theoretical bases are necessary. A perception of psychology bound to a renewed, democratic and more humane society led to rejection of traditional psychology and opened the way to subject-science. The major work,* Foundation of Psychology, *appeared in 1983, followed by* Learning. Foundation of Subject-Science, 1993.

This attempt at a learning theory builds on post-structuralist theorems of French sociology (Michel Foucault) as well as on the arguments of the student movement. Critical psychology manifests itself today through an Institute of the Freie Universität Berlin, its own society – the Society for Subject-Scientific Research and Practice (Gesellschaft für subjektwissenschaftliche Forschung und Praxis, GSFP) – a comprehensive online archive with a bibliography of comment (kritische-psychologie.de), a mailing list (crit-psych@yahoogroups.de) with several hundred international members, and a printed newspaper 'Forum Kritische Psychologie/FKP' published by Argument-Verlag. Current further developments are based largely on the theoretical work, 'Learning. Foundation of Subject-Science' of 1993.

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VET reform challenges for the teaching profession: a lifelong learning perspective

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The article addresses key challenges for the teaching profession, and corresponding institutions, to secure a prominent role in a VET reform, which is devoted to a lifelong learning perspective. These challenges may apply to EU countries but draw on the author's work in transition countries. The article clarifies the difficulties for vocational education and training to incorporate lifelong learning as a guiding theme. It then refers to fragmented teacher education approaches to new teacher tasks, which are no longer limited to classroom work, but comprise school development activities and cooperation with regional stakeholders. It discusses the new role of the vocational institution within the frame of lifelong learning. The article ends with the discussion of the complex interaction between policy and practice of vocational education and training reform.

Introduction

Industrialised societies are increasingly developing from an industry-based to a knowledge-based economy, in which the nature of work is changing, shifting away from occupations rooted in industrial production to occupations associated with knowledge and information. This shift has changed the type of knowledge required: specific knowledge, which supports the ability to act, is becoming more important than classical scientific knowledge. As a consequence, not only the EU but also individual countries and trans-national organisations like the OECD, the World Bank and Unesco have embraced the need increasingly to invest in education and training. Two documents in particular have emphasised this development. The EU Memorandum on lifelong learning made clear to all Member States the long-term importance of education and training as a human resource to make Europe a more competitive force in the world. But it was the OECD's Programme for International Student Assessment (PISA) study that really put education on the political agenda. Following the shockwave generated by PISA, especially in the OECD States that showed up relatively badly, countless proposals for reform were published. Most of them, however, failed to go far enough, in that they took no account of the paradigm shift that had already begun in those countries that PISA had rated highly (such as Canada and New Zealand) and had produced its first positive results. That paradigm shift is summarised in the words 'lifelong learning'. To that extent, the EU Memorandum appeared at the right time.

Admittedly, we are at an early stage of discovering the implications of lifelong learning for VET reform, albeit at a stage that seems to represent a breakthrough in how we think about permanent learning in changing times. On the one side there are socioeconomic forces for countries to invest in education and training infrastructure to keep up with the increased international competition, and for individuals to learn more and more often new subjects targeted at functional adaptation to maintain their own earnings. On the other side, the development towards a knowledge society opens up opportunities for personal development in such a way that the individual can actively participate in the change process and in shaping new perspectives in economic and working life.

The part played by teachers (and trainers) in this formative process is regarded as essential, with the result that both individual countries and international organisations show an awareness of the need to change the perception and profile of the teaching profession ([1]). Teachers' roles have become more complex, calling for greater self-confidence, dialogue abilities and creative capabilities in their work. The tasks of teachers are no longer limited to classroom work, but comprise school development activities and cooperation with regional stakeholders.

The new roles and tasks demand changes in VET teacher capabilities. It is the character of these changes that they cannot be seen as a once-and-for-all-time change. They require learning throughout teachers' professional careers. But neither is it always and only formal learning that is necessary, nor are other people always the right ones to take the choice of what to learn. Therefore, it is no longer enough any more for teachers to be sent by their principals to external courses in teacher training institutions; teachers need to be experts in their own learning career; they need to learn how to learn.

([1]) By 'teaching profession' in VET we essentially mean all individuals (teachers, teacher educators, trainers in enterprises, practical instructors, assistant teachers, facilitators, supervisors), who play a coaching, mentoring, teaching, training or supervising role in the learning process. Teacher and trainer training is the lifelong learning process of the teaching profession. It can be formal, non-formal and informal. It includes education (pre-service/initial), training/retraining/updating (in-service/continuing) of the teaching profession in public and private institutions. Training occurs on all matters, which influence the learning process of the individual, such as subjects, teaching and learning methods, pedagogical/psychological/organisational approaches, theories and practices.

The new perspective

The central message of lifelong learning for any educational system is that the individual learner is at stake and has to be taken seriously. Up to now, vocational education and training has been oriented in a quite different direction: it was more about forgetting his/her individuality and learning to function in an unambiguous and reliable way within a very often hierarchical context. This is why it is proving so difficult for VET to incorporate lifelong learning as a guiding theme. For some time, however, there have been serious attempts to develop a different approach to VET, in which the learner is seen much more as an 'entrepreneur': someone who has an idea, pursues it independently and aims to carry it through to success. In contrast to the traditional concept of VET, lifelong learning relies on the learner's individual potential. Releasing that potential and transforming it so that the learner is able to implement his/her ideas, is the central aim of lifelong learning. The individual, by acting entrepreneurially, does not simply follow instructions given to him by the teacher or trainer. The main focus is on his or the learning group's own ideas, which they try to put into practice. They must be able to assess the consequences of their own acts and, where differences of opinion arise, be able to defend and correct their own point of view confidently. Lifelong learning can only develop where a high degree of freedom exists amid conditions that are rich in context and situation. The issue is no longer the simple process of acting out a prescribed role or carrying out a given task, but planning one's own activity in a context of new challenges.

This is why self-organised project learning (idea generation, refinement, planning, implementation, and evaluation) is one of the key didactic principles; students work on an idea or a problem of immediate interest and relevance to them. This type of learning means a break with working on the basis of traditional subject or discipline orientation, as there is always a view to illustrating a larger and more essential area of reality. In this way students are able to generalise their insight and utilise it in other, new contexts.

Project orientation is not only oriented towards student learning. Any member of an organisation undergoes learning processes that are essential when working with organisational and personal development.

A detour on competence

The concept of competence is gaining popularity within the new VET orientation. Learners have to develop skills within their own contexts and they have to be given opportunities actively to steer their own development. In precise terms, 'competence' is the overall individual ability to act in uncertain and complex situations within a given context. Competence has to be manifested by performance, which is the result of professional practice. Practice can only occur where there is a setting in which professional activity is carried out. Within the world of dependent work, this is normally the organisation of a company or a public institution. Competence, therefore, is characterised by actions of an individual in varying working situations within a given organisational context. This understanding of competence highlights the role both of the individual learner and of the company/institution in developing the professional ability of the individual. From this perspective, the organisation takes on an important role in socialising professionalism and building professional identities.

This concept of competence should not be confused with a reductive and narrow perception, where overall competence is broken down into elements of single competencies mobilised by the individual in defined and recurrent situations. Competencies are thus (mis-)understood as micro-units of isolated abilities and a person's professionalism is reduced to a set of (often Tayloristic) features (Homs, 1997).

Practice-oriented teacher education

If we consider the career paths and positions of traditionally educated vocational school teachers, we form the impression that they are constantly 'falling between two stools'. They pass through school and university education, but they have virtually no contact with the VET system for which they are to work. And when they then begin working as vocational school teachers, they are teaching students with whose future working circumstances (the organisational forms and working methods of undertakings) they are unfamiliar. This situation is unacceptable.

As a rule, the education of vocational student teachers (where it exists) is rather fragmented and not practice-oriented. They acquire years of specialist know-how in disciplines such as mechanical engineering, electrical engineering or business administration, and far too little emphasis is placed on the central work of teachers, namely teaching. For example, key subjects such as group and project teaching, student assessments, learning development reports, analysis of everyday teacher conduct, are not offered by any institution. Teachers are not qualified to become experts in teaching and learning. There is a flagrant divergence between the content of teacher education and the actual job requirements of vocational school teachers. There are no suitable arrangements between specialised branches of knowledge and teaching practice, with practical training in school being intensively supported and cooperation allowed to develop between the university and the vocational school. One reason for this is the fact that teacher education is subordinated to the faculties geared to the traditionally specialised branches of knowledge, and therefore spread over a number of specialities. Another reason is that the university teachers teaching future vocational school teachers have generally neither ever been vocational school teachers themselves nor ever had anything to do with the jobs which the vocational school students seek to obtain. That is why educating for vocational school teachers, which is in line with modern standards, requires new centres, including the reorganisation of teacher education, as well as a new outlook on the part of the university teachers who educate student teachers, with emphasis on the competences which effectively improve the quality of vocational schools, their teachers and principals (Jansen, 2002).

For lifelong learning, the university/college is just one approach to learning among many others that can be listed in a VET teacher's CV. Universities and colleges should, therefore, develop a new view of themselves, which would involve the realisation by universities/colleges that:

- initial education of student teachers no longer represents total teacher education but is only the entry phase of a multi-stage learning sequence; this greatly reduces the learning pressure on student teachers, since there are institutions for subsequent continuous education and training which are better equipped for certain subjects;
- student teachers will not be able to acquire the necessary competence solely through exposure to the teaching content and methods offered by universities/colleges. The greater the demands - both from students to develop their individual abilities and from vocational schools that have turned into learning organisations and opened up to the working world - for a teacher competence, which is learned mainly from dealing with practical situations (in the classroom/school/regional environment), the more initial education for student teachers, will become insufficient.

A first conclusion that may be drawn is that training vocational student teachers should be much more closely involved with the real working world - both their own and the one their students will experience in the future. Educating student teachers in universities and colleges must, therefore, start by providing practical stages reflecting vocational school and working conditions. Second, the curriculum for student teachers must be more accurately geared to the problems, practices and prospects of an effective vocational school. This would also be a first, and important, contribution to overcoming the tiresome theory/practice dichotomy in the vocational schools. In terms of a lifelong learning perspective, the received model, which still applies (this teacher teaches theory, that instructor trains practice, and the student is left to relate one to the other), is neither contemporary nor forward looking.

If this kind of practical orientation is to be securely anchored in student teacher education, it makes sense to introduce a programme, comprising two component parts. In vocational schools, experienced teachers with the right personal aptitude would be trained as mentors. Each mentor would then be assigned from one to three student teachers for a period of several months. The general aim would be to develop teaching skills. The student teachers, individually, would have to set themselves very personalised learning targets, which they would then pursue consistently in the course of their practical programme. It would not be the mentor alone who verifies whether the targets were being achieved; the student teachers themselves would also monitor their own progress.

The second component would be for the university and college to enter into partnerships with undertakings in the region, so

that each student teacher has the opportunity to spend several months doing practical work in a company. This kind of partnership would not only benefit the student, who thus gains practical understanding of undertakings' organisational procedures, but would also enable the undertaking to take advantage of the student's acquired pedagogical knowledge to further its own training tasks.

Independently responsible vocational institution

The ability of VET to play a crucial role in lifelong learning of the individuals depends on whether its VET institutions respond to change - if they are able to develop a central position in their region, as more 'open' organisations serving a wide range of interests and a broad clientele. It critically depends first on whether teachers are prepared to incorporate complex reforms into their daily work. A main challenge for reforming VET, therefore, is to choose an approach where VET reform and the human resource development of teachers complement each other. Policy-makers need to ensure that the investment made in teachers is sufficient and proportionate to the demands placed on them. Not only teacher qualifications must be adequate, but also their salaries and working conditions must be sufficiently competitive to motivate them to carry the reform process to success.

A second prerequisite of VET reform following the paradigm of lifelong learning is that policy-makers have to promote greater self-responsibility and self-organisation among VET institutions. This can only succeed in the long term if the main responsibility for VET processes is no longer confined to central administration, but is increasingly transferred to the vocational schools directly involved, and to their directors, teachers and students themselves. They have to introduce the management principle of 'assumption of responsibility', so that they can adopt the policies necessary to deal with the problems and challenges that arise, without having to go through complex administrative procedures. Central administration has to depart from its present practice of planning educational paths precisely in advance and organising the funding of VET institutions down to the smallest detail. Instead, as far as the curriculum is concerned, it should provide no more than the framework of a syllabus, while funding would have to be provided on a lump-sum basis in accordance with a predetermined code. The structure of the syllabus and the appropriation of the funds should largely be left to the schools themselves. The schools will have to make sensible use of this greater independence, in both internal and external relations.

Independence in external relations

The external development of VET schools will challenge the traditional separation of functions between schools and work. In EU countries, models are rapidly coming into existence, which not only stress the learning partnership between schools and companies on an individual basis, but also take care of fostering a business culture in the region, which brings together VET-institutions and universities, SME-centres, job centres, chambers, etc. in a functioning network.

In order to integrate this approach into vocational education and training, VET institutions will have to abandon their previous function as straightforward initial training facilities and evolve into 'regional competence centres' (see e.g. the new VET law of the Netherlands, which explicitly mentions 'regional training centres', but also the efforts of the Ministry of Education of the German Land Schleswig-Holstein to introduce such centres) that include different types of learners at all stages in their lives. Apart from compulsory vocational education for young students, these centres would have a share in the market as private suppliers. They would provide individuals and companies in the regions with advisory, development services and training. The centres would be a hybrid between a public and private supplier, between formal and non-formal learning, between youth and adult training, between supply for individual learners and for SMEs or other companies, and between supply for employees and employers.

The best way to ensure this is for them to become more involved in cooperative projects with institutions that provide a source of comprehensive knowledge (universities and research facilities) and detailed, practical and empirical knowledge of entrepreneurship (small business development agencies), with the assistance of which they can engage in innovative activities. An innovation strategy of this kind would incorporate built-in teacher training, as the teachers would

be required constantly to adapt to the changing requirements of their clientele. These activities would simultaneously have 'spillover' effects on initial VET.

Leadership and change agent teams

The traditional bureaucratic and hierarchical organisational structures of the VET institutions are counterproductive to the innovation requirements described. One identifiable avenue of change is the prudent reduction of those structures, and the simultaneous reorientation of the entire school staff. The aims of the change include greater scope for discretion and enterprising action on the part of the school management and increased independent responsibility, teamwork and public contact for the teaching staff.

These changes undoubtedly frame a new context for leadership. Traditional leadership is, above all, aimed at control. The principal's main role is that of a generic manager for personnel, finance and budgeting, legal and public information functions and dealing with scheduling, reporting, handling relations with authorities, and overcoming crises and special situations in their schools. Sometimes, principals additionally see themselves as instructional leaders, extending their positional power to influence directly classroom curriculum and teaching/learning processes.

In modern VET institutions, the principal also has managerial functions. But there are important changes: the scope of her/his functions is much more related to overall school performance. A first consequence is that, to be able to dismiss incompetent principals, the principal's contract is not lifelong but, initially, lasts for only five to seven years, after which she/he has to be reappointed. Second, the principal has greater responsibilities and rights. She/he is responsible for the school's budget as a whole, exerts an influence on recruitment, and decides on promotions and bonuses to reward exceptional performance by their teachers. She/he can also dismiss unsuitable teachers, provided that a transparent procedure is in place (Rolff, 2002a).

Any leadership approach has its history; each developed in a context of organisational and broader social goals, needs, norms, ideas, and expectations. Control-driven leadership develops within a supply-oriented school organisation. The principal fulfils the requirements of the state rather than serving the individualised demands of its clients and societal stakeholders. As a consequence, the supply-driven organisation manages work according to the principles of routine and standardisation, which gives certainty to the school.

But neither the style nor the type of leadership described would fit the new context of a demand-driven school organisation. 'Commitment' strategies, or 'control', are called for. School staff has to be supported to understand the reasons for change; their commitment to developing, trying out and refining new practices should be fostered. That means principals have to widen their strategic view and increasingly focus on organisational goals to change and so view increased capacity for change as one of their central outcomes. This type of leadership, which could be called 'transformational', is especially attuned to the influence of organisational structure and culture on the meaning people associate with their work and their willingness to risk change (Leithwood et al., 2002).

There is an emergent strategy, which has been employed in recent ETF projects, to support the culture building process in the VET institution by a so-called change agent team (CAT – comprising selected teachers from within the school organisation). An important role of the CAT is to call attention to the importance of social resources in the school and to establish a climate which encourages managers and staff to act in enterprising ways. Teachers are therefore no longer confined exclusively to their own subjects and their own classes but work closely together with their colleagues and the undertakings in their region. The teachers in a collective effort permanently assess (analyse and interpret) their context with the labour market in the region and adjust their practice. They spend time with the participating undertakings and sit in on their colleagues' classes, automatically exchange ideas and give feedback about their work, set six-monthly targets, develop indicators for successful training, etc., and so make their work a matter of public record.

Learning organisation

As we have seen, the paradigm of lifelong learning presents the VET institution with challenges in two dimensions, external and internal. On the external dimension it forces

the VET institution to deinstitutionalise its organisation to serve a much broader clientele with a wide range of interests. Internally, and within this new context, the VET institution has to reorganise itself in a way that changing is considered an ordinary activity rather than an extraordinary one. These different types of changes permanently require significant new individual and collective learning on the part of the principal, teachers and administrators. To achieve this, the VET institution should be reconstructed as a 'learning organisation'. What has been said about self-organisation by students also holds true for the VET institution as a learning organisation. The self-organising VET institution amounts to a project, in which the entire staff comes together to determine the organisational conditions that enable them to take advantage of the idea-generating and problem-solving capacities of each of their members.

Having said this, we should be aware that the term 'learning organisation' consists of two words that do not seem to suit each other well at first glance. In bringing them together both of them will change their traditional meaning. Learning will lose its formal structure and has to integrate all other aspects of learning: non-formal and informal ones, tacit and everyday knowledge, attitudes and experiences. It becomes an unavoidably untidy and protracted process, in which differences, conflicts, emotions, etc. have to be reflected to construct new understandings and further develop one's repertoire of practice. But this will only happen if the principal and the CAT, together with the entire staff, are able to establish a structure in which an effective collaborative culture can grow; one in which teachers feel comfortable exchanging their individual ideas, where experimentation is not only tolerated but desired and where making mistakes is embedded in true interaction.

Within a setting like a VET institution, the term 'organisation' is – according to organisation theory – 'over-determined': on the one hand there are ambiguous and contested goals, on the other, uncertain techniques or procedures for accomplishing their goals. The members of the organisation must take account of multiple legitimate stakeholders when establishing their goals and procedures. In case of a VET institution, they include, for example, social partners and other members of the regional working world, political and education authorities, universities, special interest groups and, last but not least, students, teachers and trainers. They must negotiate what they will do and forge agreements on what changes will be made. This is a highly political and interpretative process.

Evaluation

In order to be able continually to improve their performance, VET institutions need a feedback system which can be empirically implemented, and on the results of which their future development can be based. For lifelong learning it is important that such an evaluation encourages the VET institution's own development in a professional and self-confident manner, and that the school's aim is to conduct an open and effective evaluation.

Any evaluation system should take into account both the improvement of the VET institution's internal organisation and its external environment, meaning its improved response to local/regional needs. It is also important that such an evaluation system not only reflects the opinions of those directly concerned at the VET institution, but also of those who professionally support the school and those to whom the school is accountable. The VET institution, social partners, the teacher training institution and the school's education authority should co-operate in the evaluation.

Evaluation is a component of the quality cycle management of the VET institution, which, if successfully done, moves in an upward spiral. Planning, implementation, evaluation, reflection and corrective measures follow each other continually and it is not always easy to distinguish between them. But the crystal point of any quality development is the VET institution's programme. It consists of a list of common values, challenges and objectives, an action plan and evaluation measures, which has been agreed upon for a limited period of time. In the end, the programme becomes the measure on which the development of the VET institution has to be evaluated.

A type of evaluation, which appears increasingly to be gaining acceptance in Europe, is based on quality indicators and consists of an internal (self-evaluation) and external

evaluation. It is important that the external evaluation be based on the same principles, quality indicators and terms as the school's self-evaluation. The school's self-evaluation should, accordingly, be organised by the change-agent team, while the external evaluation is generally carried out by the VET institution's education authority.

Since each evaluation is time-consuming, it is impossible for a VET institution to conduct a comprehensive self-evaluation on an annual basis. It must therefore indicate the main points, which vary from year to year. For one thing, the findings of a school's self-evaluation are for the school itself and need not always be published. The VET institution needs a protected testing ground, which allows it to take risks.

The external evaluation is conducted every few years, for example every five years. The major aim of the external evaluation is to enhance the positive effects of the self-evaluation. The external evaluation group's functions are: to verify the content of the self-evaluation report, to give recommendations on areas that could be further developed, and to provide an opportunity for dialogue between evaluators and 'evaluatees' that will strengthen the self-knowledge developed during the self-evaluation process. The findings of the external evaluation are published (Schratz et al., 2000; Rolff, 2002b).

The role of the teacher training institution (TTI)

According to the new concept of the VET institution as a learning organisation a main role of the TTI should be its contribution to developing school enterprise capacity through a continuously supportive process that stimulates and empowers schools (principals and teachers) to acquire the necessary competences based on their own reflections, experiences, values and understanding. Capacity building for VET institutions includes the professional development of individual teachers, focusing not only on expertise and pedagogical know-how but increasingly on the understanding of technology as a new feature of professionalism in teaching and training. It requires an understanding of the pedagogical potential of technology and the ability to integrate it into teaching strategies.

But teacher professionalism cannot only be seen as an individual competence as it neglects key conditions of teachers' work. The TTI should be aware of the fact that teacher and trainer training is more likely to enhance the development of teachers and trainers, if it includes the objective that teachers and trainers should function as part of a learning organisation. The ability to cooperate in a team is an essential part of this attribute but teams of teachers are still rare. Single subject and age groups exist only loosely together as, currently, school organisation does not require collaboration. The quality of a school, therefore, is defined in an additive way: as the sum of single teachers' work and not as the synergy of the whole school. To overcome this, the TTI should initiate and facilitate site-specific and site-generated team-working projects, i.e. geared to the specific circumstances of individual schools and the teachers and trainers working in them.

Another main task for the TTI is networking. The TTI may be said to have a similar role to the CAT, but intervening at a higher level: what the CAT is for the individual school, the TTI is for the CATs. The links between the CATs is not only a question of interaction but of learning together. Each school's boundaries normally exclude everything that does not fit in or support its own mode and activity. To reach a state where joint work and creation between CATs could be possible, requires changes in their interaction. A learning partnership between the CATs, which the teacher training institution has to establish and support, can be a useful tool in ensuring that the CATs will learn from each other by developing joint activities on common topics.

The TTI should also follow cooperation between the VET institutions and the companies and support the establishment of regional partnerships between them. It should organise workshops on topics of common interest such as:

- designing and implementing ICT supported learning;
- structural problems in setting-up local partnerships between VET institutions and companies;
- pathways and bridges for individual teachers in the context of lifelong learning.

Support and accountability by the education authority

Although the Ministry of Education and regional authorities provide relevant conditions for developing VET institutions, by far the largest number and most influential elements outside the VET institution are associated with the education authority. Traditionally, this supervising body has the power to prescribe necessary measures for quality development and assurance of 'its' schools. But, for a learning organisation, each single school must decide on its own how it will assimilate these interventions. What the education authority has to learn is that the school, the principals, teachers and administrative staff are the key to quality and that it can only initiate and support their further development. This new understanding will affect its leadership function with regard to the schools.

In general, the new leadership requirements for VET institutions also apply for the education authority. Its leadership has to loosen its 'control' functions and increasingly integrate functions that widen their strategic view and focus on 'commitment' strategies to foster organisational learning in VET institutions. The following points should be mentioned:

❑ the vision and mission of the education authority has to engender this sense of commitment;

❑ participation in its decisions and delegation of decision making to VET institutions is a sine qua non for organisational learning of VET institutions;

❑ the education authority has to foster a collaborative culture and an interactive learning environment between the VET institutions.

But support of, and participation by, schools and the teaching profession is one side of the coin; the other has to do with transparency in the school, information for stakeholders about what happens in schools and self-confidence in the teaching profession, being unafraid of benchmarking its own school achievements with regional, national or international indicators. It is important that the education authority makes every effort to qualify principals and teachers in developing and implementing school programmes and their internal and external evaluation. Only if the teaching profession recognises evaluation as the other side of individual autonomy, a basic of lifelong learning, does it achieve full understanding of what can be called the 'professionalism of teachers'.

Overall, two fundamental professional commitments should make the education authority's system work: the authority's commitment to support and its sensible use of accountability measures to bring VET institutions to qualitatively higher learning organisation levels for the benefit of their teachers, clients and stakeholders (Fink and Resnick, 2001).

Policy reform and school practice

Having addressed key challenges for the teaching profession (and its corresponding institutions) aiming for a prominent VET reform role, focused on lifelong learning, we should not forget to mention the challenges of implementing the reform process itself. Formulating reform implementation according to the central message of lifelong learning (see paragraph 2) is helpful in making sense of the complex interaction between policy and practice in VET reform.

In many countries formulating VET policy is seen as a prestigious task, reserved for those with high status, contrasting with the much less prestigious implementation. This fact has been strengthened by the conviction that there is an inherent inertia and resistance of the teaching profession to change and that, therefore, change is only to happen when decisions are in the hands of policy-makers. Consequently, change has usually been viewed by teachers as something 'done to' them as opposed to something 'done with' them, which, of course, has not supported the commitment of the teaching staff.

Policy-oriented VET reform generally aims to modernise the organisational framework of VET and bring it in line with labour market needs. The key question for policy-makers is how to get there and, for most of them, the answer is more coherent and ambitious policy. They view government as their chief vehicle and, therefore, mainly focus on two areas: creating new policy instruments that seem necessary to enact reform, and reducing the inherited tangles of regulation, bureau-

cracy and incoherent governance that would impede it. If such VET reform includes the aim to change teaching, policy instruments normally contain measures such as standards that define clear and useful learning outcomes for all students, teacher training to improve enactment of the new standards, and assessment procedures aligned with the new standards.

Policy-oriented reform tends to view schools as an 'engine' to achieve results and not as human organisations with their own structural and cultural rules. Accordingly, it assumes that schools are driven by relatively homogenous activities that can be 'fuelled' by a small set of easily accessible policy instruments. But that remains conjecture, for there is little evidence of a direct and powerful relationship between governmental policy and institutional practice in schools. Experience shows that schools are highly complex institutions driven by a context-specific mixture of interrelated rules, values and beliefs. Learning culture, school organisation, leadership, academic knowledge, professional values and relationships between teachers, collaboration and consultation with the regional environment, etc. are all ingredients of school and teaching practice. And practice is a category which, by definition, is full of (unexpected) situations, driven by both the continuities of the past and the uncertainties of the future. Change unfolds in rather messy ways through the interaction of individuals in settings, where tradition conflicts with creativity. Changing one element of practice creates unpredictable reactions of other elements and of the whole school. Moreover, if several schools are included in the change process, the result may differ from school to school.

Policy-oriented reform has to admit that the question: 'What drives the reform?' might be the right one from the policy point of view, but may not be sufficient from the point of view of school practice. People create practice and, therefore, the question should be: 'Who drives the reform?' With regard to the school it critically depends on whether the principal and teachers are committed to managing the changes that should take place in and outside the VET institution, and to incorporating complex reform measures into their daily practice. A lot depends on whether they are supported in taking ownership of those change measures which directly affect their professional and personal life. Policy reform tends to neglect this view; it favours a hierarchical sense of the reform context, for instance, in the description of different intervention levels (classroom, school, region, state) or in interpreting events at higher (political) levels of the reform context as more important to success than those at local level. Moreover, policy-oriented reform tends to place a premium on a top-down management and to assume an ordered sequence of activities. Significantly, the actions are segregated and ordered in a hierarchical way: policy-makers at the top of the hierarchy make plans while the people down the chain are more or less relegated to carrying out the plans, completing the predetermined goals and objectives of the agents of systemic reform. Evaluating the results, the systemic reform perspective tends to see local variation in implementation as problematic, that is, an unfavourable interruption to the designed reform process (Cohen, 1995).

The overarching reason for neglecting the teaching profession in VET reform is the traditional policy view on managing reform (a set of technical requirements such as introducing national VET law, curriculum regulations, financing schemes, etc.). The policy function tradition is keeping reform management largely in the hands of policy specialists at national level and focusing on consistent procedures. It seeks to assure compliance with the standards and regulations established centrally. Another view on managing people in VET reform, the so-called human resource aspect, looks at reforms from the angle of social skills to be required to create and maintain a successfully functioning set of relationships within the reform community. The balance of these two, the policy and human resource management approach, is at the heart of the debate on the nature of managing reform processes. The human resource management view is associated with a more responsive approach, placing responsibility and authority for change at the location where change is needed: the individual organisation. It emphasises the need for commitment rather than mere compliance. It is also assumed that to achieve this, all stakeholders will need to be involved, not just policy specialists. The management of people becomes of central strategic importance and the focus moves from compliance with policy to embedding and empowering all human beings involved in the change process, motivating them to be-

come change agents and giving them ownership. To achieve this, policy-makers have to become part of a 'learning community' that implements a project, in which specific project goals and methods are made concrete over time by the participants involved. Negotiation, flexibility and adjustment on the part of practitioners and policy-makers are key to the success and sustainability of any school related implementation.

Summary

A lifelong learning perspective demands new ways of thinking about the role and tasks of the teaching profession in VET reform. We have indicated main challenges that will most likely result but much remains to be learned about the actual process of implementation. Understanding the aspects of future VET reforms is important, if we are to develop measures that could help our partner countries to find their ways to set up modern VET systems.

Our findings can be summarised as follows:

1. The ability of the VET system to play a crucial role in lifelong learning for individuals depends on whether:

- teachers are prepared to incorporate complex reform measures into their daily work; whether not just teacher qualifications are adequate, but also their salaries and working conditions are sufficiently competitive to motivate them to carry through reform successfully;

- VET institutions respond to change: if they are able to develop a central position in their regions, as more 'open' organisations serving a wide range of interests and a broad clientele.

2. The central message of lifelong learning is that the individual learner is at stake and has to be taken seriously. Within this new VET orientation the concept of competence is gaining ground: teachers and learners have to develop skills within their own contexts and they have to be given opportunities actively to steer their own development.

3. Universities and colleges, which educate student teachers, have to realise that student teachers will not be able to acquire the necessary competence solely through exposure to the teaching content and methods offered by them. The greater the demands – both from students to develop their individual abilities and from VET institutions that have turned into learning organisations – for a teacher competence which is learned mainly from dealing with practical situations (in the classroom/school/regional environment), the more initial education, will become insufficient.

4. Essential prerequisites of the paradigm of lifelong learning include promoting independent initiative, independent responsibility and self-organisation in VET institutions. This can only succeed in the long term if the main responsibility for the VET processes is no longer confined to the central administration, but is increasingly transferred to the VET institutions themselves. Central administration has to depart from its present practice of planning educational paths precisely in advance and organising the funding of VET institutions down to the smallest detail. Instead, as far as the curriculum is concerned, it should provide no more than the framework of a syllabus, while funding should have to be provided on a lump-sum basis in accordance with a predetermined code.

VET institutions will have to abandon their previous function as straightforward initial training facilities and evolve into 'regional competence centres' that include different types of learner throughout life. Apart from compulsory vocational education for young students, these centres would have a share in the market as private suppliers. They should provide individuals and companies in the regions with advisory, development services and training. The centres would be a hybrid between a public and private supplier, between formal and non-formal learning, between youth and adult training, between supply for individual learners and for SMEs or other companies, between supply for employees and employers.

For the purposes of the innovative restructuring described, a new type of leadership, which could be called 'transformational', is required for VET institutions, especially attuned to the influence of organisational structure and culture on the meaning people associate with their work and their willingness to risk change.

There is an emergent strategy to support the

culture-building process in VET institutions by a so-called change agent team. An important role of the CAT is to call attention to the importance of social resources in the school and to establish a climate, which encourages managers and staff to act in enterprising ways.

VET institutions need a feedback system which can be implemented empirically, and on the results of which their future development can be based. For lifelong learning it is important that such an evaluation encourages the school's own development in a professional and self-confident manner, and that the school's aim is to conduct an open and effective evaluation. In Europe, a type of evaluation, which appears increasingly to be gaining acceptance, is based on quality indicators and consists of an internal (self-evaluation) and external evaluation.

5. According to the new concept of VET institution as a learning organisation the new role of the teacher training institution should be its contribution to developing school capacity through a continuously supportive process that stimulates and empowers schools (principals and teachers) to acquire the necessary competences, based on their own reflections, experiences, values and understanding.

6. The new leadership requirements for VET institutions also apply for the education authority. Its leadership has to loosen its 'control' functions and increasingly to integrate functions that widen their strategic view and focus on 'commitment' strategies that foster organisational learning in VET institutions.

7. According to lifelong learning principles, school reform should be understood as an enterprising learning event by all people involved in the change process. The participants constitute a learning community that develops a project, in which they themselves make specific project goals and methods concrete over time. Negotiation, flexibility and adjustment on the part of both the agents of policy and of practice are keys to the success and sustainability of any school related approach.

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The French Vocational *Baccalauréat* Diploma: space of a plural transition for the youth

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The French secondary hierarchical educational system resting upon strong structuring dualisms, has been modified by the creation of the vocational baccalauréat. This aims at offering students who failed in general education a path for continuing their studies or catching up through tracks that are socially more prestigious. Some 20 years after its creation, do students find in this diploma a chance to create their own pathway? Has it changed the social perception of vocational education and training (VET)? From our research, this track seems to be, for students, a space, time and period for a plural transition: from failure to success, from weak self-esteem to self-confidence, from dependence to autonomy, from childhood to adulthood, from school to work. Using case-studies, we analyse the diverse transitions occurring, mainly during the school period, through the dynamic of social representation of VET.

Introduction

Until the vocational *baccalauréat* diploma was created, the French hierarchical educational system rested on strong structuring dualisms: on one hand, the opposition between general and technological education, and vocational education; and on the other hand, the opposition between short and long studies. At the secondary level of education, the general *baccalauréat*, considered prestigious, welcomed students who were to focus on higher education. At the opposite extreme, the vocational *Certificat d'Aptitude Professionnelle* (CAP) and the *Brevet d'Études Professionnelles* (BEP) were considered as the route of relegation and exclusion, reinforcing negative characteristics in students encountering learning difficulties. But since the creation of the vocational *baccalauréat*, this structure has been modified (see appendix). This vocational *baccalauréat* must offer students who failed in general education a path for continuing their studies or catching up through options that are socially more prestigious. As a result, this programme could play an important, if not determining, role in schooling for young people excluded in the battle against academic failure. But do young people excluded from the élite track find in this option, as Alice lost in Wonderland, a chance to create their own pathway? Some 20 years after its creation (1985) we could question whether this diploma has fulfilled its objectives. This paper will not attempt to answer this question but will focus on an additional important aspect: has the vocational *baccalauréat* programme contributed to innovation and opinion changes in French initial secondary education? More precisely, has the social perception of vocational education changed since this *baccalauréat* was created? A Leonardo da Vinci project entitled Analysis and comparison of social representations of VET in different European countries (VET-Cultures) suggested that for students, this vocational education programme seems to be a space, time and period for a plural transition: from failure to success, from weak self-esteem to self-confidence, from dependence to autonomy, from childhood to adulthood, from school to work. In this paper, we analyse some of those transitions, occurring mainly during the student period, via case-studies examining the dynamic of social representation of VET.

A victim of the role that the institution itself has forced it to play, vocational education and training in France has always seemed a negative and exclusive model in the eyes of the public at large (Pelpel and Troger, 1993) until, perhaps, the arrival of a new vocational diploma: the French vocational *baccalauréat* diploma. Created in 1985, this new diploma, undertaken in two years after an initial period of vocational training and allowing immediate entry into working life, was not only intended to attest to skills adapted to the new technological demands and changes in work organisation but also to renew interest in VET. Now, 20 years after its creation, it could be questioned whether this diploma has met its original goals. The aim of this paper is more modest, raising the issue of whether the vocational *baccalauréat* programme has contributed to innovation and opinion changes in French initial secondary education. More precisely, has the social representation of vocational education changed since this *baccalauréat* was created?

From different studies (Marquette, Mériot and Kirsch, 1994), the vocational *baccalauréat* seems to be an interesting success. Even though it does not lead to well-established recognition in the occupational field concerned, and while the companies making

use of this diploma do not exactly coincide with the objectives underlying the creation of the diploma, vocational *baccalauréat* holders are successful in finding employment and remain happy to have undergone such training.

If those students belong to 'the children of the educational democratisation' qualified by Beaud (2002), the focus of this article should be on that last point, complementing a study carried out by the Regional Observatory of Higher Education (ORFS) in 1999 in the Low-Normandy region. Therefore, what does this new diploma do for trainees and how has this diploma contributed to a change in vocational initial education and training social representations?

To answer this question, this paper is organised as follows. The first part gives the framework of French vocational initial education and the original objectives of the French vocational *baccalauréat*. The second part attempts to analyse, using case studies, the plural transition during the school period that constitutes vocational *baccalauréat* training for trainees; the process uses analysis of the dynamic of social representation of VET.

Initial secondary vocational education and the role of the vocational *baccalauréat*

Vocational education institutions in initial secondary training

There are three vocational branches in initial secondary training (see appendix): one which prepares students for a CAP ([1]), one which prepares them for a BEP ([2]) and finally, one preparing them for the vocational *baccalauréat* ([3]). Those vocational diplomas are mainly ([4]) earned through vocational *lycées* ([5]).

Different branch roles

The branches leading to a CAP or a BEP prepare students over two years for the same level of qualification – that of skilled worker – but are different both in purpose and content. The CAP gives practical skill in particular areas (catering, hairdressing, carpentry), allowing immediate professional integration. The BEP, on the other hand, gives skills in the more demanding technological areas in which professional integration requires higher qualifications (accounting assistant, nurse assistant) and can, therefore, lead to further study for a vocational or technological *baccalauréat*.

Different branch study topics

The specialisations in each branch also vary from one diploma to another. There were more than 200 CAPs preparing students for specific employment in the industrial sector, for example in electricity, plumbing, car maintenance mechanics, in the tertiary sector, such as hairdressing, cooking and sales, and the agricultural sector, such as labouring, gardening or wine growing. There were 39 BEPs preparing students for the same sectors, such as car body work specialist, administrative communication and secretariat, sales and accounts, transport, wines and wine growing, horticulture, growing of fruit trees, etc. The branch leading to a vocational *baccalauréat*, attainable after a CAP or a BEP, offers courses adapted to the needs of the business world, at a level between qualifications for workers and skilled workers, and those for higher technicians. Introduced in 1985, there are some 30 vocational *baccalauréat*s, in various specialities. In the industrial sector, for example, there are specialities in electrical equipment and installations, in industrial product definition, and car maintenance. In the tertiary sector, there are subjects such as catering, sales and representation, and artistic careers; in the agricultural sector, there are maintenance and operation of agricultural machines, the timber industry, etc.

Differences between centres for training apprentices (CFA) and vocational *lycées*

A centre for training apprentices is the institution where apprenticeship students learn a trade. Apprenticeship is a type of vocational training allowing young people from 16 to 25 years of age to learn a trade under a private work contract lasting from one to three years. They are under the control of a master and also follow courses in alternation with their practical work.

There are two categories of *lycée*: for general and technological education (LEGT) and focused on vocational studies, the vocational *lycée* (LP). But, in accordance with the framework law of 1989, all technological and vocational diplomas may be studied for under

([1]) The certificate of professional aptitude (CAP, *Certificat d'aptitude professionnelle*).

([2]) The technical school certificate (BEP, *Brevet d'études professionnelles*) is a national diploma which becomes a springboard for entering into courses leading to a vocational or technological *baccalauréat*.

([3]) *Baccalauréat*. A national secondary school leaving diploma organised at an académie (regional) level. The baccalauréat is the first stage in university education, since it gives access to higher education. There are three types of baccalauréat: the general, the technological and the vocational *baccalauréats*, the last being created in 1985.

([4]) Vocational *baccalauréat* can also be earned through an apprenticeship status in Apprentice Training Centres (CFA). Apprenticeship (apprentissage) is a type of vocational training allowing young people from 16 to 25 years of age to learn a trade under a private work contract lasting from 1 to 3 years in alternation with their practical work, in an institution called an apprenticeship centre (CFA, *centre de formation des apprentis*).

([5]) *Lycées*: State or private secondary schools at higher level. There are two categories of lycée: those for general and technological education (LEGT, *lycée d'enseignement général et technique*), and those for vocational studies (LP, *lycée d'enseignement professionnel*).

the apprenticeship system. While initial training in formal schools remains the main purpose of vocational *lycée* courses, the Ministry of National Education wants State schools also to remain open to apprenticeship. Article 57 of the five-year law on employment and vocational training dated 20 December 1993 allows apprenticeship sections or units for training in apprenticeship to be opened in all *lycées*, in close partnership with the business community and with the agreement and assistance of the region. In both these cases, the head teacher is responsible for the content of the courses.

Differences in curriculum and organisation

Whatever the branch, a vocational training programme is based on general education courses ([6]), plus technological courses and practical internship periods in the professional world. Hours vary depending on the specialities chosen by the students in the different branches (Table 1).

Vocational courses vary according to the speciality and the skills required, but they are always organised in the same way:

- technological core subjects for several similar specialities, or within a single professional sector, for instance, all the courses for office jobs such as law, economics, accounting, etc.;
- specialised or practical courses, more particularly linked to future work;
- training periods in industry, introduced in 1992.

Those two tracks (*lycées* and CFA) are also two different ways of training for vocational diplomas. The characteristic of the first track is that courses are mainly carried out in school (*lycée*). Although there is a compulsory period of internship in industry, the proportion of theoretical and practical training in a workshop or laboratory in a *lycée* is much higher. Vocational training through an apprenticeship contract, carried out in CFA, follows exactly the opposite method; most of the training takes place in industry and compulsory education is added. The apprentice is no longer in school but is recruited by the company under a paid work contract.

General and technical courses (hours per week) and practical training in different diplomas **Table 1**

	General courses	Technical courses	Training periods in industry
CAP	From 14h30 to 16h	From 12h to 17h	12 weeks
BEP	From 14h to 22h	From 16h to 20h	8 weeks
Voc.Bac.	From 12h to 14h	From 16h to 18h	From 16 to 20 weeks

Source: French Ministry of Education

Differences regarding studies in further education

At the end of CAP and BEP training, students can pursue their studies through vocational or technical paths, leading to a *baccalauréat* diploma. But this decision rests mainly with the teaching team and the class council decision as it is particularly important to have full knowledge of each pupil's profile before choosing the type of study. Unlike the vocational *baccalauréat* the technological option prepares students not so much for immediate entry into working life but for further study in higher education, particularly in higher technical studies. Therefore, access to the technological branch is recommended for students who have shown 'considerable motivation and willpower, autonomy and capacity for hard work rendering them capable of succeeding in studies leading to a higher technical or even engineering diploma' during the two years of CAP and BEP general studies. Also, in order to assure every chance of success for students choosing the technological *baccalauréat*, they are first guided towards adaptation first level classes ([7]) (*premières d'adaptation*), in which they undertake general revision, before joining the technological final classes common to all students, of whatever origin. Then, according the candidates' wishes and places available, the committees decide whether to send students to vocational first class or adaptation first class.

Vocational *baccalauréat*: a new level

A new and original place

The history of the vocational *baccalauréat* started in 1983-84 with a discussion in the vocational consultative commission (CPC, commission professionnelle consultative) and a report by the Employers' Union of the Metalworking and Mining Industries (UIMM); the latter made a pressing demand for the quantitative and qualitative development of vocational skills and qualification at the French level IV of education

([6]) General education comprises French, a modern language, history and geography, art, civics, mathematics, physics and social and professional life for all branches. For departments preparing for a CAP and a BEP there are additional classes in mathematics and family and social economics. The purpose of this teaching is to provide basic culture for the modern world with a professional orientation.

([7]) Adaptation first level class (*première d'adaptation*): this class offers students having gained good marks in the last year of BEP the opportunity to continue their study at the technological *baccalauréat* or certificate of technician levels.

through a new diploma 'vocational baccaluréat'. Its request emerged in response to a reduction in school leavers after the technical *baccalauréat* (as those students increasingly pursue their studies in higher education). Since 1984, the union of the deans of vocational *lycées* had faced the same issue. Thus, the Ministry of Education suggested the creation of this new diploma at level IV (see appendix) called vocational *baccalauréat*. This was announced in June 1985 with the law being passed in December.

The purpose was to promote and revalue vocational education in schools now called vocational *lycées* and thereby to allow students in such schools to be recognised as '*bacheliers*', a dignified title before only given to general and technical education schools students. The desire to make education more democratic, was marked by Ministry of Education objectives in the Guidance 1989 Law which stated that the 'Nation wants to lead 80 % of a typical age group to the *baccalauréat* level'. Such an objective implied that technical and vocational education should take part in this national effort: the proportion of CAP and BEP holders wishing to pursue their studies and not enter working life was only 20 %. The revision of vocational education happened also at level V through the creation of technical classes at the fourth and fifth grade. In addition, the BEP was revised, which now prepares up to the vocational *baccalauréat* level.

A pluralistic objective of VET *baccalauréat*

The crisis in youth employment and important structural changes in production and labour organisation implied new training and qualifications. Therefore, the national Ministry of Education wanted, through this guidance law of July 1989, to reform the guidance and tracking system and to highlight two major objectives: to lead 80 % of a typical age group to the *baccalauréat* level and the others to a diploma at level V. It was in this framework that the vocational *baccalauréat* diploma was created. Its creation also allowed the homogenisation and reduction of the number of vocational branches. This diploma appeared to be the minimum requested as a vocational certificate, leading to the invalidation of lower vocational diplomas, such as the CAP and BEP.

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

Vocational *baccalauréat* principles

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

Purpose of the paper, methodology and data collection

Origins of the research

This paper is part of a European Project called 'Analysis and comparison of social representations of VET in different European countries', covering five European countries. This comparative research aims to shed some light on the differences and commonalties of socially shared meanings and representations in the different countries influencing the newly established path to common European policies for employment and training. Its main aim is to depict how VET is perceived by different social actors (those directly involved as learners in training activities, those belonging to the world of business, and those who perform roles of teachers/trainers), and to explore the evolving paths of mutual understanding and learning among them. This paper presents the learner group data ([8]).

Methodology and data

The data were collected mostly through focus group interviews. Six vocational *lycées* from Low-Normandy were investigated and five groups of people were interviewed (learners, trainers, deans, *baccalauréat* holders, employers, workers). In all, 60 people were interviewed.

Rather than use existing occupational categories it was decided to make a distinction between three broad types of work as follows: learners training for a job primarily with documents, primarily with people and primarily with products or objects.

The investigation used interviews with students trained respectively for accounting and secretarial jobs, for business, commerce and sales, and for maintenance in automated mechanical installation tasks and in climatic engineering. The trainees were between 18 and 22 years old and enrolled in the last year of the two-year vocational *baccalauréat* programme in vocational *lycées*; there were none from centres for training apprentices, CFA. All of them had experienced in-company training periods of 16 weeks introduced into the two-year vocational *baccalauréat* programme.

The data were collected through focus group interviews of six or eight learners in each group, totalling 26 students. The focus-group interviews lasted about two hours and covered the following topics and issues:

- ❑ VET and the labour market/employment: how did you get involved in your current course? How well will the course you are doing help to prepare you for getting a job when you have finished?

- ❑ VET and education: how do you feel about your current course? How does this course compare with your previous experience of education?

- ❑ VET and social exclusion and inclusion: do you think that people doing your current course are given the respect and social standing they deserve? Do you think that people doing your current course will be given the respect and social standing they should have in the job they are going to do in the future?

- ❑ VET and corporate identity: do you think that your current course will give you the respect and social standing you deserve in the organisation in which you work or are likely to be working in the future?

- ❑ VET and lifelong learning: do you think that what you are learning now provides a solid foundation for things that you might want to learn about in the future?

- ❑ VET and life project: what role does your current course play in your overall educational career? What role does your current course play in your future plans concerning how you want to live your life?

- ❑ VET and preparation for work and for the new economy: do you think your course will prepare you for the new economy and for future changes in the work that you do? Will your course help you to contribute to innovation in your workplace?

Student representation of the vocational *baccalauréat*

Vocational *baccalauréat* training programme: a new meaning? Vocational *baccalauréat* holders, from a half-tone employment situation ...

At the beginning of the 1985-86 academic year, only 1 300 young people followed their BEP diploma with a vocational *baccalauréat*; nowadays, almost 170 000 students are enrolled in the vocational *baccalauréat* pro-

([8]) For the complete research findings, see Gendron B., *Social representations of Vocational education and training in France through the French vocational Baccalauréat Case Study, ITB-Arbeitspapiere*, Universität Bremen, Bremen: Institut Technik und Bildung Press, 2004b.

Number of specialisations and students in first-year vocational *baccalauréat* (state schools only) **Table 3**

Sector	Subject areas	Male students	Female students	Total students
Industrial	31	22 915	1 779	24 694
Services	16	9 679	22 959	32 638
Total	47	32 594	24 738	57 332

Source: French Ministry of Education, 1994.

gramme. The increase was very rapid during the initial years after the introduction of this new diploma but has since gradually slowed, though it still increases by more than 2 % annually.

However, this overall trend hides significant differences from one training specialisation to another; while the industrial sector combines a smaller number of students with a very large range of training specialisations, the service sector has a great number of students and a limited range of specialities, as can be seen in the 1994 figures for the vocational *baccalauréat* (Table 3).

Studies from the French Centre for Research on Employment and Qualification (*Centre d'études et de Recherché sur l'Emploi et la Qualification*) and the regional observatory of higher education (ORFS, *Observatoire Régional des Formations Supérieures*), on young people coming out of these new training programmes, one at a national level and the other one regional, assess job entry among those who go directly into working life. They show that, despite a favourable situation in the labour market with rapid job entry for those students, (better than that of those with a lower level of occupational qualification such as BEP and CAP), their work activities and job mobility have not measured up to expectations. For instance, two years after the class of 1990 left training, over two-thirds of the men with manufacturing specialisations still held a job as 'skilled worker' and more than 85 % of the women in services remained 'office workers' or clerks in companies. None of those in manufacturing *baccalauréats* was employed as a 'shop technician', the reference job designated at the vocational *baccalauréat* diploma's creation. Even the work of *baccalauréat* holders employed as operational agents in maintenance departments is also far from what had been expected at the origin in the referential employment of the *baccalauréat* diploma.

To a positive image of the Vocational *baccalauréat* training programme

Though demands from companies making use of them do not exactly coincide with the anticipated objectives of the diploma, both the ORFS and this study indicate that students still remain satisfied with their vocational *baccalauréat* training and would repeat their decision. Based on questionnaires addressed to *baccalauréat* holders (1994, 1995 and 1996 year) from Low-Normandy, 2 500 *baccalauréat* holders from 1996 were interviewed (O.R.F.S. 1999) a few months after earning their diploma, about their two-year training programmes and their jobs.

They retained a positive image of their two years spent at the vocational *lycée*, irrespective of the ultimate employment, for several reasons. First, the majority quoted the quality of the education provided, with more than 60 % (both men and women) declaring that this training programme was 'a real chance' in their educational trajectory. Regarding their job, 7 in 10 women said they had been well prepared for their work even though only 4 in 10 had a direct link between their actual job and their training programme. All indicated that their employers appreciated the diploma and that the vocational *baccalauréat* degree was, for most of the men, useful for getting a job. Despite having a different job from that expected, trainees see the vocational *baccalauréat* as a success. This observation raises the question of how that can be explained. Is VET changing in trainee perceptions?

A positive vocational *baccalauréat* representation

Vocational *baccalauréat* holders seem to benefit from a longer period of schooling and to keep in mind the quality of their training programme. So, how does this new degree differ from the other training and vocational training courses? And how do they perceive this new training programme and this new diploma? Some answers can be found from the French hierarchical educational structure and among trainee points of view collected through French monographs from the VET-Culture research described earlier.

Promoting vocational education in a hierarchical educational system

This change of perception seems to deal with institutional, economic, environment and pedagogical aspects of such a training programme, which offers important transition steps for trainees.

Before the vocational *baccalauréat* was created, vocational education accumulated negative perceptions of enrolling all students doing poorly in general education. With the vocational *baccalauréat* came changes, even if too slowly. It offered students who fail in general education a path for continuing their studies, or catching up, in ways that are socially more prestigious. Vocational *baccalauréat* holders seem to benefit from a longer period of schooling.

'We were all special cases, not social cases but ... all of us had some problems ... or had a little something which was not running well ... and all of us had to deal with it by ourselves ...' (female student, document speciality) ([9])

'At the end of the first stage, I was not good and then when I started the BEP programme, my school grades went up, and therefore that way I become more satisfied' (male student, production speciality)

'I didn't choose this track, but at the end of my vocational baccalauréat *programme, I told myself, yes, I have finally found something I am completely satisfied with'* (male student, production speciality)

'I wanted to do vocational studies, but my mother wanted me to enrol in a general education programme, but after two years spent, I was disgusted with school ... I was discouraged and I wanted to drop out ... but my mum enrolled me in a BEP programme and then, that runs better, and I felt better ...' (Male student, people contact speciality)

In addition, it has contributed to the spread of new forms of knowledge generated by the technological revolution of the late 1960s and the transformation of work tools that this entailed.

As long as validation through the labour market was able to counterbalance the tendencies of the education system, a form of equilibrium was maintained. Indeed, the system was accused of functioning in a discriminatory manner. But a favourable situation of employment at that time permitted compensation for the inequalities of cultural capital, and manifested a concern for egalitarianism that was deeply rooted in the national culture. With the employment crisis, this fragile equilibrium was broken.

The rupture took two forms:

- Orientation of education towards sharp competition for the increasingly rare jobs available to young people. This situation increased competition between young people at different levels of training, on the one hand, and between young people and adults already on the labour market, on the other.

'With a BEP diploma, we cannot find a job easily... the baccalauréat *diploma is nowadays a minimum ... and parents are aware of the fact that times have changed, we are not living in the context that they experienced themselves' ... 'if you don't have the* baccalauréat *degree that will be very tough...'* (dean of a *lycée*).

Students and their families reacted to this competition by extending the length of studies on the basis of the generally confirmed observation that the higher the diploma level, the greater the chances of entering the labour market. This resulted in a hierarchy of tracks and fields of specialisation that, by accentuating vocational education's mission to encourage the pursuit of studies, tended to 'devocationalise' it.

'Because you have to get your baccalauréat degree, and again my parents told me, at the end of my BEP diploma, they wanted me to return to adaptation first classes ([10])*'* (male student, people contact speciality)

'My mother wanted me to enrol in a general education programme' (male student, people contact speciality)

- The growing domination of general education over technical and vocational education. With decreasing opportunities for employment, the assignment of students to vocational education, especially in the first stages of choosing options, was based increasingly on an implicitly remedial model. This led to an increased gap between a normal general education and a less pres-

([9]) The selection of the specialities of VET training programmes has been done according to three categories; rather than using existing occupational categories, it was decided to use a distinction between three broad types of work. Also the categories used by sociologist and in the European VET-Culture group, these categories are, in our case-study: work primarily with people or people contact (commerce and sales, business, waiter), work primarily with products (maintenance in automated mechanical installations, climatic engineering, graphic industry), work primarily with documents (accounting, secretary).

([10]) See note 7.

tigious vocational one considered as a means of rescuing students with academic problems.

As a result, the Ministry of national Education decided to undertake reorganisation of the initial vocational training tracks in the vocational *lycées*, promoting modernisation and upgrading the system. The desire to extend studies in the vocational *lycées* was unanimous. A clear statement of the government's intention was to develop technical and vocational instruction and to introduce a *baccalauréat* level training in *lycées*. This new higher vocational degree at the second stage of initial training, the vocational *baccalauréat*, was impelled to adopt the values and evaluation criteria of general training in order to benefit from the identical status.

The mission was to give to the vocational *baccalauréat* both its name and its final form: a two-year training programme after initial vocational training, plus innovative pedagogical tools involving in-company experience. Implementing such a vocational degree at the *baccalauréat* level contributed to a positive innovation and has been appreciated by students and their family as well.

'Because I have to get my baccalauréat degree, and again my parents told me, at the end of my BEP diploma, they wanted me to return to adaptation first classes but I said to them: "no, if I have to continue I am going to enrol in a vocational baccalauréat *programme" and they agreed, so I went to the vocational* lycée' (male student, people contact speciality)

'I prepared first for a BEP diploma, and then, because I got great marks, I decided to continue with a vocational baccalauréat *programme'* (female student, people contact speciality)

'I wanted first to attend general education, but I didn't have the level requested, therefore, they told me to attend a vocational track, I didn't have the choice, therefore I prepared for a BEP degree over two years and because I was enjoying that, I went to a vocational baccalauréat *programme*' (male student, production speciality)

'I was doing well in the BEP programme, so I said to myself "why not continue?" ... families, teachers, all of them incite us to reach the baccalauréat *level*' (male student, people contact speciality)

Moreover, priority was given to 'the promotion of the greatest number (i.e. 80 % of a given age at the *baccalauréat* level) but also the promotion of the best' (Solaux, 1990). It reinforced the role of the *baccalauréat* degree as the unique centre of gravity in French initial education, which at the same time reduced the value of lower training levels. This level IV helps to repromote the vocational track by opening the door to further studies in the higher education system. Indeed, the 'vocational *baccalauréat*' constitutes an academic rank like the other *baccalauréats* and can therefore open the way to further studies. To achieve this level and to earn this diploma was a challenge and something very important for them. This was mentioned frequently in the trainee discourses.

'Today, that's 80 % (who will earn their *baccalauréat* diploma)! And I wanted to be part of them; that's all. We grew up with this idea and that's also my parents who entertain this one'(female student, production speciality)

By its title – *baccalauréat* – the vocational *baccalauréat* created an unprecedented situation in the educational system, which also brought some ambiguities (Leroux, 1998). Through in-company experience, it aims not only at giving qualifications to trainees:

'To earn the baccalauréat, that's also gaining qualification' (male student, production speciality)

It also aims to ensure that holders have a title 'the baccalauréat'; this is still used as a filter and remains the academic reference for getting a job.

'To have been accepted in a vocational baccalauréat *programme, this is like going through a net ... step by step, people have been kicked out but ... there are still people remaining, and here we are, still here!*' (female student, contact speciality)

'To earn the baccalauréat that's important for more responsibilities. Therefore, we need to pursue studies after the BEP and moreover, in a professional sector. With a BEP degree, we are at the bottom, but the higher you go as with a vocational baccalauréat degree, and eventually with a BTS, the better posi-

tion you get' (male student, production speciality)

'For qualification, a lot of employers seek vocational baccalauréat *holders. Just for instance, this year, we got a lot of job offers before the end of our training programme'* (dean of a *lycée*)

Therefore, after a chaotic beginning in the educational system, for some of them, this diploma seems to give them space for transitions allowing them to regain their dignity, self-esteem and confidence.

'I thought that those who were enrolled in a BEP programme were not normal, there was something wrong with them, but the clue was because I was not working at school, and I didn't care for school ... but now, I am ok, everything is going well, fine' (male student, people contact speciality)

'This vocational baccalauréat *gives a second chance, to people like me, who didn't reach the level requested in general education to continue our studies'* (female student, document speciality)

'In academic lycée, *we were too numerous, teachers didn't care, so I came here and I loved it right away, and moreover I got great marks, I felt better'* (female student, document speciality)

'I don't want to finish my studies with a vocational baccalauréat, *I want to pursue a BTS programme; therefore I will try to find a boss to do it through apprenticeship'* (female student, document speciality)

In that new framework, more autonomy and responsibilities have been given to students which helps in recovering self-confidence lost from their failure in general education or at collège level.

Moreover, the vocational *baccalauréat* programme was set up with innovative pedagogical tools and a new logic of training combining fundamental knowledge – justifying the title *baccalauréat* – and in-company vocational experience.

The creation of the *baccalauréat* was supposed to respond to profound changes in work organisation, such as decentralised preparation, decompartmentalisation, and integration of the different functions, in the case of the processing industries. These changes were supposed to ensure greater autonomy for the operators, allowing them to deal with certain problems encountered in the course of their activity. Therefore, in this aim, more autonomy classes and courses have been developed and given to the students to prepare their classwork on their own or with their classmates. In such a context, students have to learn how to handle their free time and to learn from each other. Also, the qualification of skilled workers has been developed in terms of kind of work and the forms it takes in the different activities more than in terms of greater occupational know-how.

'That's completely different ... teachers are taking us into account ... because before, when we didn't succeed or understand, we were put at the end of the classroom; here, instead of that, they explain until we understand' (female student, document speciality)

'We are more free but always well advised' (female student, people contact speciality)

'Even teachers look at us differently, and differently from BEP students ... we are no longer BEP students where they were asking us to underline in red colour such a sentence or another. In the baccalauréat *programme, they ask us to know how to take notes, and to be autonomous in our work. If we have a deadline for homework, we have to deal with it on our own; if you encounter some difficulties or if you need help, teachers are always around ... and at the beginning of the school year, they explain what they expect from you ... That's our lookout! One has to extricate oneself'* (female student, people contact speciality)

'We are no longer in BEP classes, ... we have documents, tables ... that we have to discuss and to analyse together, we have to know how to take notes ... that's more relaxed, ... even teachers are more relaxed ... In a BEP classroom, teachers are teaching behind their desk and give their course, and then when that's over, they are gone ... here, they can be sitting on their desk, they 'live' their courses ... that's linked to the selection at the entrance ... because the students who chose to continue in a vocational bacccalauréat *programme are motivated, more than they were in BEP because they were enrolled in such training without their agreement, whether*

you follow or not ... who cares? (female student, people contact speciality)

The relationships between teachers and students in such a programme seem to be unique or special for several reasons: the number of students per course, the student ages, and the selection process. These different factors may allow new teaching experiences and entail new behaviours. Teachers are more available and experience new ways to teach in their classrooms.

'Because of small classes (classes are separated into two parts), if there is someone who has a problem, he can take him aside to take more time to explain to him' (female student, document speciality)

'We stop if someone doesn't understand, the teacher will explain to him and during that time, we will focus on something else or we will listen' (female student, document speciality)

'We know that we are not alone, they are supportive ... If I have some trouble in preparing my homework, I'll try to find out for a while and then, if I am still stuck, I will ask them tomorrow, and thus I hope to understand. Whatever, I think they are always available' (female student, document speciality)

'If there is something wrong, they will get it right away, and would like to discuss it ... they take an interest in us' (female student, people contact speciality)

'The selection at the entrance has an impact on teacher behaviour (because they have in front of them students who wish and want to belong to the vocational baccalauréat programme, they (students) want to succeed, they have decided to be prepared for a job, and to learn and to do their maximum ... and when we forget that, teachers don't forget gently to remind us that 'you have chosen to be here and if you are not satisfied you can go out ...' we can be angry with that but we cannot blame them ... that's the reality and we have to deal with ...' (female student, document speciality)

This autonomy seems to be well appreciated among students; it is considered as a proof of mutual confidence between faculty and students, and becomes part of the training and professional knowledge some of them need to acquire. The fact that they are no longer considered as anonymous but as a complete person or an adult helps them regain their self-confidence. Self-esteem can also be developed through mutual help, and by learning in a group.

'That belongs to the professional knowledge, we have a lot of hours in "autonomy classes", we also have a lot of personal work, and teachers expect from us something different (from the BEP level) ... that creates some links between the pedagogical team and the faculty ... if we want to have a break of 10 minutes to talk with the teacher, we do, or if we meet the teacher at the cafeteria, we say hello and we discuss with him or her naturally ... we are no longer anonymous, there's no longer the barrier students/teachers, it's face to face or adult person in front of an adult person respecting each other' (female student, document speciality)

'Autonomy in our work ... that's very enjoyable ... they give us work to manage with, a deadline, and then tell us "you will have to sort it out yourself, you have at your disposal a computer room, you can use whatever material you want, do whatever you want until the work has to been done on time" and that's for me what I call autonomy' (female student, document speciality)

'During the autonomy hours, we can use computers, work with our files which are stored all year if we want in a cabinet and there are always teachers around if we need help for instance in computer science, or we can work with our classmate and we can help each other to manage our work ... that's interesting and a great atmosphere, we, students in the vocational baccalauréat *programme, are close to each other and we help each other better than the others' when someone has a problem, we talk together, and we try to solve it'* (female student, document speciality)

'The vocational baccalauréat *allows more autonomy, self-management, we learn to sort out ourselves, I find that more gratifying ...'*

'Teachers put together students who got great marks with ones who had some difficulties to prepare exercises together which allow the former to explain to someone else what he understood' (female student, people contact speciality)

Beyond that, this trend of pedagogical innovation was encouraged by faculty changes,

with fewer and fewer people who have worked in production and more coming from training. More important is the introduction of in-company training periods: an average of 16 weeks distributed over the two-year programme. This internship and school-based alternation training plays an important role for such students. It contributes to their personality building and professional identity formation. That seems to be also an opportunity for them to find out what would and could be their role in the company and also in society: they feel useful.

'Moreover, we have 16 weeks of internships that allow us to acquire some vocational experience' (female student, document speciality)

'We arrive motivated when we have an internship, what we learn at school can be applied during our internships, therefore, that is the reason why we have to learn' (male student, production speciality)

'We are convinced that we can work; that's already stimulating'

'What we learn at school, we try applying and using this knowledge in the company, so that's great, and they give us some responsibilities ... we practice, therefore I am satisfied ... employers gave us some responsibilities, ... we are not only internship students for them ... they consider us as employees' (male student, production speciality)

'We've already had six weeks of internships, so we had time to learn and to be trained at the end of the in-company period, so my boss told me 'I am going on vacation, could you replace me'; at least, I felt of value, that's very pleasant because that means that she gives me all her responsibility' and if something happens, we will assume it, but nevertheless, she trusts me. That's different from the BEP internships where we were still considered as kids ... In the vocational baccalauréat *in-company period, we feel more adult, and we have some experience through some previous internships. We know what we are talking about, and that's also true that sometime we can bring them some knowledge.'* (female student, document speciality)

'In our internship in BEP, we didn't have any responsibilities, but at the baccalauréat level they treat us as adult and responsible persons ... they give us very important tasks, they trust us' (male student, production speciality)

'In such a training, we feel integrated wherever and whatever the company ... we are trained at integrating ourselves easily whatever the place, the topic and to be immediately operational'

'To introduce ourselves ... like to sell ourselves ... even for looking for an internship ... the mail, phone calls ... I will say the first month of looking for an internship, we have already to overcome barriers but then, we take our bags and go to prospect for an internship company which will welcome us ... that also helps a lot for our future ...' (female student, production speciality)

'At the beginning, we arrive with our scholarly benchmarks, I will say, like to smile on the phone, to type ... that's our ability to adapt ... and then, with the customer contact and our colleagues, we react differently, we learn from the organisation, from the company we are working with ... we forget the scholarly things, that's become a reflex ... natural, and very spontaneous ... and we bring our own touch, and learn more' (female student, contact speciality)

A new and confusing situation

The period of transition from school to working life is tending to become longer and more complicated. Young people with low levels of schooling and from low vocational level tracks are particularly affected by changes which keep bringing *'an awareness of the infernal character of the spiral that was thus set off, tied to recognition of a crisis in occupational socialisation'* (Kirsch, 1994). This problem highlights two dimensions of youth socialisation: the transition from school to work, and the building of occupational identity.

The occupational transition constitutes the path between school and working life. It represents the period when prior social codes, corresponding to those of school life, have been lost but those of their future work collective have not yet been acquired. During the previous economic period, this transition was treated by the solidarity of immediate support networks, companies and/or vocational guidance counsellors. Family marriage, neighbourhood and social network were channels for finding a job. With the unem-

ployment crisis, this natural regulating process was no longer guaranteed. The trend towards recruiting young vocational *baccalauréat* graduates for jobs traditionally held by CAP or BEP holders may lead to a downgrading of the new diploma. This risk is accentuated still further by the fact that the number of those former diploma holders is declining because of the increasing number of people obtaining the diploma (and its impact described by Beaud, 2002) and the race for longer studies. Therefore, the success or failure of the vocational *baccalauréats* is just as much at stake within the company, through work organisation and recruitment choices in a youth unemployment crisis. Demographic trends, and their economic and labour market impacts, are expected to slow down; it will be interesting to observe the company recruitment attitudes.

The building of occupational identity among youth raises the same kind of questions for Kirsch (1994). During full employment, the process occurs naturally on the basis of models provided by the family environment and surroundings, and the young people's different socialisation groups, and by the intermingling of generations that takes place within the company. In the economic crisis framework, this natural process stopped as companies ceased their role of smoothing youth entry into working life, by selecting operational, experienced and skilled workers. Moreover, in this diploma massification and increasing job-competition, employers become more demanding, resulting in a hierarchy of tracks and fields specialisation that, by encouraging further studies, tends to 'devocationalise' it. In this context, vocational *baccalauréat* students are still split between negative and positive opinions of VET.

'That's well known, it's a dead end, if you cannot attend general education, therefore you will be enrolled in the vocational track' (male student, production speciality)

'The (vocational baccalauréat*) programme brings good things but it's a pity that people look at it as different from the general education track. General education is an open route for people who don't know what they want to do. In contrast, the vocational track, that's for people who know exactly where they want to go, we have already some information about our professional future life'* (female, production speciality)

'I went backward selecting the vocational track … That's clear, people believe that the vocational education level is below general education; that's the position and before getting involved in vocational education I shared this opinion, but now that I am enrolled in such a programme, I agree that the level is lower but the vocational knowledge is another matter, another field, and that's as interesting and fruitful as the general one' (female, production speciality)

'I enrolled in the vocational track with some trepidation because it has a 'bad' reputation ... that's adult people who talk about it that way ... not especially my family or my friends, but when I was at the lycée *in general education, we were talking about the different* baccalauréats*, it always came out that "vocational", the BEP or CAP programmes were trash, were composed of "crazy people"' ... They were for sure far below us regarding the level of education ... and we got the same opinion for vocational* baccalauréat*, and worse from teachers who think the same way and talk about it the same way; I met several people from different backgrounds who promote this false perception. Because now I am in this track, I changed completely my opinion, young people from my generation got a wrong image of it from adults or teachers'* (male student, production speciality)

If the vocational *baccalauréat* holders seem to benefit from a longer period of schooling and even if their work activities and job mobilities have not measured up to expectations, their way of seeing VET and their VET point of view and representation are changing; those changes have to function within organisational and social contexts, leading nonetheless to a confusing situation which could also depend on the student goal: earning a diploma, access to a qualification recognised by employers or labour market entry. If vocational training is still in search of identity, the VET *baccalauréat* two-year programme was, for the trainees, a time for plural transitions.

Conclusion

Before the vocational *baccalauréat*, the French undergraduate educational system rested upon structuring dualisms. Especially at secondary level, the vocational track was considered as the track of 'relegation and exclusion' (for students who failed in academic courses). But since the creation of

the vocational *baccalauréat*, this structure has been modified and thus, contributed to a main innovation in French initial secondary education. This programme offers students who have failed in general education a path for remedial education, continuing their studies or catching up studies toward more socially prestigious courses. As a result, this vocational education programme plays an important, if not determining, role in developing schooling for young people excluded from, and in the fight against, academic failure. In this framework, those vocational *baccalauréat* holders seem to benefit from the plural characteristics of this programme (longer period of schooling, maturation, new pedagogical methods, i.e. another way to learn and to be taught). If some young workers interviewed stated that they have not obtained the job expected, as emphasised in Beaud research (2002), they all stressed that if they had to choose again among secondary education tracks, they opt for VET'. This programme appeared to be, for those young people excluded from the élite track, a real chance to build a way forward, as Alice in Wonderland, regaining through this vocational programme their self-esteem, confidence and desire in education. Such results are already significant in an individual and personal development perspective: they are focused on emotional competences which remain too often ignored in traditional education, even if they are crucial for work and above all to allow human capital growth (Gendron, 2004a). Is not the prime aim of education and training development of the whole person? Have we forgotten what Aristotle says when he maintains that education must allow man to fulfil himself and find out what he truly is? The vocational *baccalauréat* programme appears to be a space, time and period for a plural transition: from failure to success, from weak self-esteem to self-confidence, from dependence to autonomy, from childhood to adulthood, and from school to work.

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Key words

Vocational training, training evaluation, learning, pedagogy, individual development, sciences of education.

A simplified diagram of the French secondary and tertiary educational system (and the apprenticeship system) **Figure 1**

<table>
<tr><td></td><td></td><td></td><td></td><td colspan="3">Main general curricula
(in regular education: student status)</td><td>Curriculum in CFA
(apprentice training centres: apprentices status)</td></tr>
<tr><td rowspan="4">Higher education</td><td rowspan="4">Age 18 and over</td><td rowspan="3"></td><td rowspan="3">Level II-I</td><td>Doctorate</td><td colspan="2">(below new architecture in the Bologna process)
Doctorate</td><td rowspan="3">Engineering diploma</td></tr>
<tr><td>Advanced Degree
(DEA - Diplôme d'études approfondies)
(DESS - Diplômes d'études supérieures spécialisées)
(Dîplôme d'ingénieur)</td><td colspan="2" rowspan="2">Master Degree (previous Maîtrise + DEA or DESS)</td></tr>
<tr><td>Master (Maîtrise)</td></tr>
<tr><td>BA Degree (Licence)</td><td>BA Degree (Licence)</td></tr>
<tr><td></td><td>Level III</td><td colspan="3">Undergraduate diploma and Higher-grade technical diplomas
(DEUG -Diplôme d'études universitaires générales)
(DUT- Diplôme universitaire de technologie),
(BTS- Brevet de technicien supérieur)</td><td>DUT, BTS</td></tr>
<tr><td rowspan="2">Lycée</td><td rowspan="2">Aged 15 to 18</td><td rowspan="2">3 to 4 years</td><td>Level IV</td><td>General school leaving certificate

(baccalauréat general)</td><td>Technical school leaving certificate

(baccalauréat technique)</td><td>Vocational school leaving certificate

(baccalauréat professionnel)</td><td>Vocational school leaving certificate

(baccalauréat professionnel)</td></tr>
<tr><td>Level V</td><td>General course</td><td>Technical course</td><td>BEP
CAP
(lower grade vocational certificates)
Vocational course</td><td>BEP
CAP
(lower grade vocational certificates)
Vocational course</td></tr>
</table>

Widening participation in technical and vocational education and training: experiences from Romania

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The discussion about participation and partnership to ensure the quality of TVET is not new, but the capacity of the educational actors to establish effective and sustainable cooperation with the stakeholders, especially in transition economies characterised by instability and unpredictability, is still a challenge. We have tried to present here a participatory planning model for TVET which started to be used in Romania, and which, accompanied by appropriate support measures, should lead to bridging the TVET schools, the community and the social partners. The model is based on a regional approach and is supported by measures focused on cultural changes in TVET school management (a new vision on partnership, quality assurance, social accountability, etc.), changes at the level of teaching and learning practices (integration of work and learning, student-centred methodologies, inclusion of students with special needs, etc.) and creation of an institutional network to pilot this integrated approach (the so-called resource centres).

Among the numerous challenges that education in Romania has faced in recent, so-called transition, years is the effort to turn from a centralised, command-driven system, to a flexible and demand driven one, having as its main principle the attempt to widen the participation of different actors in all stages of vocational education and training. This paper investigates some successful examples of practice which contributed to bridging the gap between TVET schools and the beneficiaries of its services. Diversification of functions, involvement of stakeholders and creation of institutional capacities and structures in TVET institutions are realised to different levels at the moment, with a significant contribution from the EU funded Phare programmes.

General context of educational reform

There are already different approaches and perspectives in literature on the key moments or milestones of educational reform in Romania. In order to depict the evolutions and transformations in recent years, we will offer a perspective which could help in understanding the general context of reform and transformation of governance in education. Birzea and Badescu (1998) tried to depict different stages of reform, but these should be also updated. The three main steps they identified are:

- destructuring (1990); the main instruments of communist education (e.g. political indoctrination, over-centralisation and abusive control of individuals and institutions) were removed. General objectives of education and the structure of the education system were reconsidered;
- stabilisation (1991-92); priority was given to defining a legal framework that would re-establish a coherent educational system, according to the new social, political and cultural values. The new Constitution stipulates the right to education for all, free access, diversification of education supply, equality of opportunities, additional private education provision and emergence of alternative schools;
- restructuring (1993-95); in this period important reform programmes are launched in different sectors of education, with the financial and technical support of international organisations (World Bank, European Commission). In 1995 the Law on Education was adopted.

At least two stages could be added, according to the evolutions after 1995:

- comprehensive reform (1996-2000); major changes are planned, coherent at component level (curriculum, management, evaluation, teacher training, etc.); the main intention was to pass from sector/domain oriented reform to systemic reform;
- 'reform of the reform' (2001- ...); there are two components or directions of educational policy after the government change in 2000. One is to strengthen the achievements of the previous team and to build on their experience. The second trend is to rethink some of the important measures already under implementation. Some of these changes could be considered logical, even normal, but others are just changes of changes, predominantly justified by political reasons and not by evaluations of the policies in force.

Fortunately, this last situation is not so characteristic of vocational education and training, where the significant transformations after year 2000 have augmented, and are consistent with, previous reforms. A systemic approach to TVET reform is envisaged lately, trying to harmonise initial and continuous vocational training, to rationalise the system and to make it more flexible and responsive to the demands of the labour market.

One of the most important changes of this last period, impacting also on vocational education, was the extension of compulsory education from 8 to 10 years. This begins at the age of 6/7 years and comprises primary education (grades 1-4, according to ISCED 1) and lower secondary education (grades 5-10 according to ISCED 2) organised in two successive cycles: gymnasium (grades 5-8) and the 9th and 10th grades. The last two grades are organised in educational paths: a vocational path, the School of arts and trades, leading to level I of qualification and the lower cycle of high school (see also Annex 1).

From command/supply-driven to demand-driven TVET.

The command-driven TVET system in place before 1990 is a fact and needs no further argumentation and description. The reality is that the governing principles of organisation and functioning of vocational education did not change as quickly as expected and suggested by the new developments toward a free, market economy. Even the centralised command system progressively dissolved after the collapse of communism, vocational education remained – and this is still partly the case – a supply-driven (sub-)system, from the point of view of educational offer. This problem exists across the whole educational system, but the consequences are more direct and visible in the case of TVET because of expected immediate integration of its graduates into the labour market.

The change of perspective from mass to flexible production requires broader skills and knowledge than those offered by previous specialisation. Some countries from ECA ([1]) eliminated early specialisation after basic education, others did not, while others introduced it even earlier. (Hidden challenges to education systems in transition economies, 2001).

The characteristics of the TVET system in Romania at the beginning of the 1990s are mainly:

- early specialisation and fragmentation of qualification structure in a very large and narrow number of specialisations, which created a rigid and inadaptable TVET educational offer;
- a centralised decision-making system of policy development and, as a consequence, low participation of stakeholders;
- a prescriptive and outdated curriculum, based on the frequent direct relations between TVET schools and a major employer in the area;
- a poor partnership structure with employers and low capacity in schools to diversify the educational offer and to respond to the new challenges of the labour market.

A first Phare project to reform vocational education and training was initiated in Romania in 1995. Like all Phare funded projects, this one was meant to support national reform and offer two important contributions:

- finance for modern equipment and training materials for schools, plus their rehabilitation;
- technical assistance from the EU to contribute to the conceptual and methodological developments needed for a modern TVET system.

The transfer of TVET development know-how was, and still is, important for transition countries like Romania. The commitment to a market economy, and a new type of relationship between vocational school 'products' and employment, needs the lengthy experience of western countries to ensure consistency and sustainability. The quick passage from post-communism to post-modernism, from centralised economies to an information/knowledge based economy would be even more difficult if not assisted and advised by the more advanced.

A comprehensive TVET reform project started in 1995 (through the project Phare RO 9405), including the main aims of:

([1]) ECA = Europe and Central Asia.

❑ adapting the structure of TVET delivery to the needs of the emerging market economy;

❑ switching from command to demand-driven educational planning;

❑ designing a new curriculum, in accordance with the needs of new qualifications required in the labour market;

❑ strengthening social partnership in VET, especially through setting up tripartite consultative bodies at county level (Local Development Committees).

This first reform project was implemented in 75 pilot schools across the country, representing all main vocational domains. The new institutional and qualification structure, and the curriculum produced in the framework of the project, were considered successful and extended from the pilot schools to the whole vocational education system.

Plotting the transition path from command-driven to demand-driven TVET was not an easy process; the work still continues in this respect, having in mind directing principles such as:

❑ preference to functional policies (development and improvement) and to systemic approach;

❑ learning as the centre of pedagogy, learners at the centre of educational policies;

❑ policy development and chance process are driven by analysis and consultation;

❑ priority to individual and community demands, articulated at regional level (see also Rado, 2000).

The visible steps forward made through this programme, which was completed in 1998, are continued now under the new multi-annual Phare project. In order to reach social and economic cohesion, a new Phare project was launched in Romania, with multiple components; one of those (Phare RO 0108 TVET) is focused on modernisation of vocational and technical education and training and started effectively in 2003. In the same year, the structure of TVET was modified again, according to new policy developments and decisions, and particularly concerned extending compulsory education from 8 to 10 years.

Recent decisions from the Ministry of Education and Research aimed at creating facilities to improve access to initial education and training, by making vocational education and training more attractive and also offering equal opportunities to access for those from disadvantaged regions, such as rural areas. The main difficulty in organising TVET in rural areas comes from the economic gap between rural and urban areas and the restricted ability to produce prognoses regarding the economic development strategies for these areas.

The limited partnership between schools and enterprises and insufficient didactic equipment in schools (especially those in rural areas and small and medium size towns) are the main obstacles in the development of TVET.

A further issue is including students with special educational needs into mainstream education. Specific actions initiated in the Phare 2001 project aimed to strengthen the institutional capacity of vocational schools to offer the best opportunities to these students.

The Phare 2001-02 programme is due to be implemented in 100 schools, distributed over 11 areas of economic restructuring with potential for economic growth and 22 resource centres (schools involved in the previous project and with potential for assistance and networking according to regional and field/qualification structure).

The overall objectives of the new project envisage:

❑ consolidating the achievements of the reform acquired through the Phare VET RO 9405 programme and supporting the rationalisation and modernisation of the present TVET system;

❑ reviewing responsibilities, governance and accountability mechanisms in the provision of initial TVET in line with the social and economic development, in a regional perspective;

❑ ensuring equal opportunity for all young people to obtain a good professional qualification at a level equal to European standards by providing vocational education which responds flexibly to the needs of each individual.

After one year of implementation, very intense and rich in activities targeted toward the broad objectives mentioned before, the first results/achievements are already visible.

A new curriculum was developed for level 1 qualification. The important aspect here is that a new methodology for curriculum development is now in place, based on vocational training standards, modular approach, competences and a credit system. This new approach tries to ensure the flexibility of vocational training, mobility/transfer of competences between qualifications and coherence between initial vocational training (IVET) and continuous vocational training (CVT).

A system of TVET quality assurance was developed, based on the European Framework of Quality Assurance ([2]) and the main tools of this system were piloted in the 22 resource centres. The necessary revisions will be made after this year and the system will be extended to other TVET schools.

A comprehensive human resource development programme was launched, based on specific methodologies, according to the training needs identified in different areas: student-centred learning, inclusion of students with special needs, partnership development and working with enterprises, vocational counselling and guidance, educational planning on demand, etc. Teachers, school directors, inspectors and representatives of social partners participated in training stages during this first year.

Development and initial implementation of a new model for educational planning, with three tiers, situated at regional, local (county) and school level. If a rationalisation of the TVET offer is envisaged, this has to be based on careful evaluation of needs in the labour market, the individual needs of students, and the capacity of schools to meet all these needs.

Areas in which further intervention for improvement is strongly needed, the project as yet unable to produce satisfactory results, include:

❑ the yet limited participation of social partners (especially employers and employer organisations, trade unions) in planning and developing vocational qualifications. The difficult situation of small and medium enterprises, engaged in a 'survival economy', unstable, sometime chaotic, with high levels of taxation makes it difficult to motivate involvement in education and training. The debates about setting up a system of incentives for employers, at least for participating in organising learning at the workplace for students in TVET, have produced no results for the time being;

❑ the level of coherence between initial vocational education and training (IVET) and continuing vocational training (CVT). The new curriculum, based on standards, competences and credits is expected to bring a significant contribution in this respect, but mainly the creation of an agency for qualifications, which will be in charge of a national framework of vocational qualification, to be the reference both for IVET and CVT;

❑ the limited number of TVET schools assisted by the project (122) ([3]). This creates examples of good practice, but dissemination and generalisation of results across of the whole TVET system is difficult to ensure, both in terms of human resources and financing. Careful consideration of this issue is needed to avoid creation of potential gaps between assisted and non-assisted schools. The broad aim of the project is to contribute to social and economic cohesion, not to deepen the differences.

Widening the participation of different actors

Transparency, accountability and participation in TVET are governing principles of the reform efforts. The following could be mentioned in relation to participation:

Participation of social partners

This is especially for enterprises developing sound and relevant work experience for students, but also for curriculum development and validation and planning the educational offer. Improving the quality of vocational education is not a goal to be achieved by the sole efforts of schools and the education sector, even supported by the know-how and financing of Phare projects. The participation of social partners in planning and delivery of TVET was a priority from the first vocational education reform project. The main social partners considered crucial to the sustainable development of TVET are:

([2]) See the work of Technical Working Group for quality assurance in TVET, European Commission.

([3]) i. e. the 100 supplementary TVET schools integrated in the new programme Phare 2001-02, and the 22 TVET schools involved in the first Phare reform project and functioning as resource centres because of their potential for assistance and networking due to their previous experience [editor's note].

- representatives of employers and employer organisations,
- trade unions,
- governmental organisations/agencies,
- parents.

It is a high priority to break the vicious circle in which employers claim that schools are not providing high quality professionals and schools complain about the lack of interest and low participation in education by enterprises. More structured cooperation, with clear roles and responsibilities, with an effective system of incentives and disincentives in place, could prevent this mutual blame and create a platform for working towards common goals. School managers and teachers were involved in training activities in which they learned how to work with enterprises and how to develop together partnership plans. The needs of the employers, both in terms of qualifications and competences are the main tools in planning education on demand.

For the first time in Romania, vocational training standards for each domain, developed mainly by educationalists, were validated through panels by representatives of the world of work. This created a platform for debate regarding the competences required by employers and the structure of each qualification.

'The link between school and workplace is the milestone for any vocational education system. If the links are weak, there is a risk that system will produce graduates difficult to place on the labour market, the results being youth unemployment and expensive vocational conversion programmes; if the links are too much centred on individual needs of employers, the system becomes difficult to modernise and the mobility on the labour market (...) becomes difficult' (Deij and Badescu, 2003, p. 48).

Participation of support services providers

This particularly includes guidance and counselling services and in-service teacher training institutions. Career guidance is crucial for further development and improvement in Romanian TVET. The inappropriate social perception of TVET among parents, coupled sometimes with unclear policy measures, creates problems in effective distribution of students in the system and their future employability in the labour market. There is in place a national network of counselling and vocational guidance centres, one for each county delivering services to all educational customers in their area (teachers, students, parents). As well as these centres, almost every vocational school has its own counselling and guidance specialist(s) and a counselling and guidance office in school, at the service of students and teachers. The county centres network is coordinated and financed by the Ministry of Education and Research and aims to deliver services to pre-university public schools. Another important network of support service providers is represented by the so called Teacher's Houses: these are county in-service teacher training centres also financed by the Ministry of Education. In addition, in recent years, a free market of training providers, both for teachers and for CVT, has started to appear. Different types of providers, such as NGOs, private companies, universities, VET schools, etc. have become more involved in this area.

Participation of regional bodies

This refers mainly to a newly created consultative structure, as an outcome of the new Phare project: the Regional Consortia. This is established at the level of each region and comprises representatives of local public authorities in the region, representatives of regional development agencies, representatives of school inspectorates and universities, employers and trade unions. It is chaired by the Regional Development Agency and their main task is to produce the regional action plans for TVET, based on analysis of trends and evolution of the social and economic environment in their region. Analysis of the social and economic environment in the respective region should allow the Regional Consortia to produce a long-term action plan for development of vocational education and training.

A general description of the regions and their development role would clarify the above ideas. Since 1998, Romania has been split into eight development regions, with social and economic development goals and without administrative functions. In each region there is a Council for Regional Development, with a deliberative role regarding the coordination of regional development policy. This body is composed, for each region,

of county council presidents and representatives of different types of administrative structures: cities, medium/small towns and villages; it coordinates the activity of the Regional Development Agency (RDA). The RDA is in charge of elaboration and implementation of policy documents for the respective region. The projects proposed by RDAs are financed, after approval, from the National Fund for Regional Development and other sources, identified by each RDA.

One of the most evident features of economic development in Romania in recent years was the growing importance of the Bucharest Region. The trend in all transition countries is more visible in Romania because of the dimensions of the country, both in terms of territory and population. Having 5.4 % of the whole population of the country, Bucharest brings 21 % of the GDP; 20 % of the small and medium size enterprises are registered here and 51.1 % of the total foreign investments are made in the region.

In contrast, the North-East Region is highly dependent on agriculture, with a high percentage of rural population, situated in proximity with Moldova and the Ukraine.

The planning and development of vocational education and training in a regional perspective is seen as one of the tools to diminish the regional disparities and to contribute to social and economic cohesion.

Participation of students

This is envisaged in at least two directions: participation in creating their own learning and participation in building career pathways according to their competences and the needs of the local/regional labour market. In order to strengthen the feeling of ownership of students in relation to their learning experiences, teachers were trained in modern teaching/learning methodologies, based on the principle of student-centred learning. Individual learning materials are now being developed, with a special focus on adapting learning to students with special needs. Specific measures have been designed to create an inclusive learning environment in and out of school, to support the integration of students with special needs. More than 2 500 teachers and managers from vocational schools in the Phare 2001 project were trained in the first year of the project on different topics, including those mentioned above. More than 60 training stages were organised at regional level, to facilitate networking and cooperation between schools, and delivery was ensured in teams by the experts of the technical assistance and local teacher and management trainers, trained in the programme.

'Finally, new management techniques and contemporary forms of work organisation are taking the individualisation process into the workplace where, in the wake of a serious quest for value added, traditional hierarchies and the formalised work procedures which traditionally brought order to the operations are being softened or even abandoned.' (Brater, 2000, p. 46).

Participation of parents

This is largely still to be achieved, though there are domains of school activity in which parents can definitely play a greater role:

- micro-policy making at school level;
- career guidance;
- participatory school development planning;
- organisation and delivery of work experience.

General aims

Widening participation in different processes and domains of vocational education and training is seen as a key tool in bridging supply and demand, and in creating strong links and effective cooperation between all stakeholders. In addition, the actual social perception of TVET should be challenged.

TVET in Romania faces an image deficit, caused by several factors:

- memories of the old communist system, such as:
- the social experience of parents as TVET graduates: even if the communist ideology claimed that 'working people' (*oamenii muncii*) are the owners of all goods, they had quite low social status and not very rewarding financial benefits,

❑ the structure of the previous system (narrow specialisation at an early age, outdated skills, etc.), which created a high risk type of qualified young people in the context of the new market economy.

❑ the unstable economy of transition, where the extreme dynamic of the economic sectors and reduced long-term perspective creates fear of unemployment. (Fear of changing workplace and fear of unemployment are widespread especially among adults who qualified during the previous system, when it was quite common to have only one or two work locations during the whole active life).

❑ The embedded idea that TVET is for those students not able to attend general/academic high schools. A paradoxical process happened, between two interesting evolutions. On the one side, in recent years, the formal educational expectations of parents and their ambitions for their children increased. It was taken for granted that a higher level of education means a greater chance of a better social-economic status. At the same time, a kind of elitist trend spread among parents and students and oriented their options after the end of compulsory education towards academic high schools, considered 'better' and having a superior image. Since the number of places in this type of education is limited, those remaining 'out' had to go to TVET schools, against their initial will and first option.

Even though unemployment figures show that graduates from general high schools are in the largest unemployed group, the majority of parents are still willing to orient their children towards this educational path and, in many cases, to impose it. This option may be a reaction to the negative factors but it also reflects the conviction that this type of 'elite' high school may provide more opportunity for entrance to further/higher education ([4]).

In fact, the existing realities of existing TVET schools sometimes contributed to this image deficit, through outdated equipment and endowments for practical training, lowly qualified staff, and inability to address the new type of qualifications required by employers in a free market.

Participatory planning TVET development: a regional approach

One of the significant achievements and innovations in educational planning is the move to an articulated approach in a regional perspective. As shown by Davey (2003, p. 151),

'In the run-up to accession to the EU the debate over reform and development in the candidate countries has had a strong but often confused regional dimension. This has been encouraged by the EU and has had three interlocking strands:

❑ regional government: the possible creation or reform of an upper tier of self government, both to complete the reforms of public administration begun in 1990 and to stimulate socio-economic development;

❑ regional policy: the desirability of directing public investment and encouraging private investment to reduce the growing territorial disparities in income and employment;

❑ regional development planning: basing increasing proportions of public investment on regionally conceived and focused strategies and priorities rather than nation-wide sectoral programmes and targets.'

In each of the seven development regions with schools involved in the new Phare project (Phare RO 0108 TVET) for modernisation of vocational education and training, Regional Consortia were created.

The activities of these Regional Consortia are related to:

❑ supporting vocational schools and vocational training providers in developing and offering qualifications relevant at national and regional level;

❑ monitoring the system of TVET quality assurance in cooperation with local school inspectorates;

❑ ensuring communication and interface between regions and national responsible bodies for early identification of qualifications needed in the labour market and occupational profiles emerging in the respective regions;

([4]) For a comparative perspective, see tables 1 to 3 in Annex 2.

❑ guidance for rationalising and optimising allocation of resources for vocational education and training in the regions.

Nevertheless, one of the main roles of these bodies was to develop the regional education action plans (REAPs) for TVET that should address the key development areas for the period 2003 to 2010. REAPs should be demand-led and should be underpinned by a sound labour market and supply-side capacity analysis.

'A standard planning approach has been proposed for the REAPs. This includes a statement of the policy context, an analysis of the current and future forecast position in relation to employment, skills, and training in the region and a plan for the development and improvement in TVET to address the market and individual needs in perspective of 2010.' (Swainger, 2003).

The main contribution of REAPs is expected to be in identifying regional priorities and designing specific actions to be taken to respond to these priorities. These action plans contain objectives and priorities covering a large spectrum of issues related to vocational education and training, according to the specifics of the region, but all the plans, in all regions, are expected to provide actions related to:

❑ the types and levels of qualification needed in the region, to respond to envisaged changes in the labour market in the perspective of the year 2010;

❑ the structure and distribution of the vocational schools network in the region to ensure a more efficient and adaptable TVET system, securing equal access for everybody;

❑ the measures needed for strengthening the partnership between schools, students and companies.

Starting from the regional level, with the REAPs, a system of planning is in place which continues with development of local action plans for TVET (at county level) and school action plans (at TVET institution level).

The local education action plans for TVET (LEAPs) represent the second tier of educational planning.

The local committees for development of social partnership in TVET are consultative structures of the county school inspectorates created initially under the first Phare RO 9405 project. They are tripartite bodies that support TVET schools in implementing national strategies, also providing assistance to inspectorates in designing scholarship plans and structuring the educational offer according to local needs.

In the new paradigm, they are responsible for developing local education action plans for TVET on the basis of the REAPs, completed and adapted in accordance with local conditions and needs. This ensures a coherent link between regional and local educational planning in TVET.

Further on in this approach we have School Action Plans (SAPs). Each individual school is trained and then expected to develop action plans at the school level on the basis of regional and local priorities. Networking between schools is encouraged by addressing together the local and regional needs for vocational education and training; cooperation between schools and companies takes a more structured form. The local partnership in TVET aims to create effective learning communities, capable of planning and implementing self-development and continuous improvement actions.

This comprehensive planning process is based on previous training of those involved and on common guidelines, jointly developed and agreed by regions. We are now in a piloting phase, in which 122 schools will start the process, learn from it and improve the tools and conditions for implementing the system generally. The expected results of this are a significant contribution in addressing the key challenges now confronting TVET:

❑ building the 'real image' of TVET in social perception and derived social behaviour: not promising more than is possible, but also not accepting the role of second-hand education;

❑ adapting TVET to the challenges of economic transition and to global challenge;

❑ building a new identity for TVET schools, more open and close to enterprises, more flexible and adaptable to internal and external changes. This aims to create com-

munity resource centres, with a wide spectrum of services and activities directed to diverse beneficiaries;

❑ reshaping the professional identity of TVET teachers, according to the new curriculum, the new role of TVET schools and the requirements of a learning-centred educational process;

❑ implementing the principles of regional development in educational planning;

❑ creating sustainable and effective partnerships with the world of work, to the benefit of both sides;

❑ impacting on initial training of teachers in TVET in all the directions mentioned above.

Creation or consolidation of regional and local bodies representing the interest of stakeholders in TVET aims to help institutionalise the participation of different actors. 'Many countries have realised the advantages of local institutionalisation of stakeholder interests. (...) Local government, union and employer representatives negotiate local training arrangements and regulate interactions between publicly-financed educational institutions and company-based initial training' (Drake, 1994, p. 159).

TVET schools as community resource centres

The intended new image of TVET cannot be created out of the global trends in organisational development. The new conditions created by the evolution toward a knowledge-based economy, conducted and regulated by the flexible specialisation and post-Fordist working relationships, is based on trust, competences and added value. The inner dynamic of the global economic and social environment take particular forms in transition countries, creating mobile and flexible labour markets, characterised most of the time by instability and unpredictability.

Learning organisations and neo-institutionalism – new trends in organisational theory – still make their impact on schools. The organisational behaviour of schools has significantly changed in two directions: structurally and functionally. We are talking in transition countries about the new type of management and a new internal organisation, more flexible and responsive to the demands and challenges of the environment and a broad diversification of functions and services.

A learning organisation can come into being only where the decision-making and decision-taking structures in all organisational areas – including educational theory, personnel, finance and school organisation – comply with the principle of self-organisation. It must be possible for those involved to develop forms of organisation which reflect the prevailing social and economic requirements and independently established key priorities. (*Teacher and trainer training. 3rd workshop on curriculum innovation*, 1999, p. 3).

As a first step in setting up community resource centres, the programme for modernising TVET selected 22 vocational education schools and started to consolidate their institutional capacity. Strengthening this capacity will enable them to become learning champions of the project and methodological support providers for the other schools in the system. The 22 TVET schools have the experience of the first Phare reform project and they came with a certain level of institutional and human resource development. They have been selected based on representing TVET domains and on regional distribution.

The major roles of the resource centres are to:

❑ transfer the conceptual and methodological knowledge as well as good practices acquired from participation in the previous project (Phare RO 9405) and in their activity as a whole;

❑ assist the changes and developments proposed for the participant schools in the new Phare RO 0108 TVET project;

❑ provide methodological support and consultancy to other schools and to become 'resource centres' for peer learning;

❑ become regional centres for continuous vocational education and training, in cooperation with enterprises;

❑ act as 'local' support for the Project Implementation Unit and to ensure a communication interface between the school in the programme and the programme management;

❑ organise and deliver in-service training activities for TVET teaching staff and managers, according to their capacities and to the needs of the vocational education and training system;

❑ bring together in learning networks the local community, the regional resources and stakeholders for strengthening social partnership in vocational education and training;

❑ promote a collaborative, associative management, focused on participation, quality assurance and accountability.

It is obvious that the organisational development perspective envisaged for the resource centres implies changes in the whole learning environment and especially in the management and teaching/learning practices.

'This new learning context implies a different role for teachers and trainers. Teachers need to learn new skills and become lifelong learners themselves to keep up to date with new knowledge, pedagogical ideas and technology. As learning becomes more collaborative, so too must teachers' professional development, which needs to promote professional networks and learning organisations within schools and institutions.' (*Lifelong learning in the global knowledge economy: challenges for developing countries*, May 2003).

The way forward

We have tried to capture in this paper the main orientations and actions directed towards widening the participation of different actors in planning, development and functioning of vocational education and training.

The experience and efforts of 13 years of educational reform of different concentration and magnitude showed that at least two types of change are needed at policy level:

❑ shift the focus from 'big' structural and systemic changes to targeted development programmes and to regional and local approaches, closer to beneficiaries of vocational education and training services and closer to the intimate functioning of educational process at grassroots level;

❑ the expected impact and the sustainability of educational change at school level (basic, grassroots level) cannot be achieved if the school culture does not change. Even the structural-systemic measures undertaken up to now implicitly or explicitly produced some cultural changes in schools; what we are talking about here is that type of cultural change that starts from inside the organisation, as an intrinsic need for its own development. Cultural change as a decision of the school staff, assumed and accepted by the critical mass of the teachers and carried out in cooperation with local community, can ensure the sustainability of reform measures. This change should be a result of internal school development, started and conducted from inside the organisation.

Building a culture of associative management and partnership in vocational education and training could be the key for widening participation in TVET in a joint effort at ensuring high quality services in the challenging environment which characterises Romania at the moment. Such ideas are not new from a theoretical perspective (or even from the practical one, if we look to the countries with a long democratic tradition); they remain key challenges for TVET development in the future in transition countries like Romania. The distance from what we know we should do to what we actually do in practice is still considerable and, sometimes, well-known solutions to the problems lack coherence in policy approach and persistence in implementation.

Structure of education system in Romania **Annex 1**

Age	Grade	ISCED		Educational level		
		5, 6		Higher education		
		4		Post high school (technical education)		
18	XIII	3				Upper cycle of lyceum (technical education)
17	XII			Upper cycle of academic high school	Upper cycle of technological high school	
16	XI					Vocational education completion year
15	X			Lower cycle of lyceum		Vocational education (school of arts and trades)
14	IX					
13	VIII	COMPULSORY EDUCATION	2	Gymnasium		
12	VII					
11	VI					
10	V					
9	IV		1	Primary		
8	III					
7	II					
6	I					
5	3		0	Pre-primary		
4	2					
3	1					

Participation rate in initial education and training **Annex 2 Table 1**

School year	Technical and vocational education					
	TOTAL	Vocational education	High school education			
			High school education - the technological path	High schools for students with specific abilities (art, sport) - the vocational path	General/ theoretical	Total high school education
	Total number of students enrolled (% in rural areas)	Total number of students enrolled (% in rural areas)	Total number of students enrolled (% in rural areas)	Total number of students enrolled (% in rural areas)	Total number of students enrolled (% in rural areas)	Total number of students enrolled (% in rural areas)
2001/2002	565 665 (11,26 %)	252 347 (15,8 %)	313 318 (7,6 %)	51 042 (2,6 %)	346 303 (5,9 %)	710 663 (6,4 %)
2002/2003	596 531 (11,47 %)	270 215 (15,9 %)	326 316 (7,8 %)	53 951 (2,3 %)	360 137 (6,2 %)	740 404 (6,6 %)
2003/2004	618 951 (12,09 %)	279 124 (17,3 %)	339 827 (7,8 %)	53 756 (2,1 %)	365 334 (6,7 %)	759 917 (6,9 %)

Source: National Institute of Statistics, 2004.

Graduate occupation distribution between 1999-2003 **Table 2**

Occupational fields	Type of education -qualification level	1998-99	1999-2000	2000-01	2001-02	2002-03
Industrial/ technical	Vocational education- level 1 and 2	53 063	49 423	52 598	44 681	55 464
	High school - level 3	52 147	47 861	45 620	39 793	46 044
	Post-High school - level 3	7 570	6 109	5 987	4 102	3 887
Agriculture	Vocational education - level 1 and 2	3 892	3 556	3 455	2 698	4 243
	High school- level 3	10 314	7 903	7 200	5 491	3 684
	Post-High school. - level 3	1 336	1 578	1 352	1 394	1 143
Services	Vocational education - level 1 and 2	21 420	17 333	22 616	20 614	23 587
	High school- level 3	15 286	15 277	14 070	13 733	18 228
	Post-High school - level 3	26 052	31 479	26 130	22 960	20 307

Source: National Institute of Statistics

Structure of employment, according to education/qualification level (%) **Table 3**

	Romania		
Education/qualification level	**2000**	**2001**	**2002**
Primary or no school graduated	14,2	13,5	8,5
Lower secondary	21,6	21,2	22,8
Vocational education (level 1 and 2)	21,6	22,3	22,1
High school (including technological, level 3)	29,1	29,1	29,3
Post-high school and foremen (level 3)	4,4	4,5	4,2
Higher education	9,1	9,4	12,9

Source: National Institute of Statistics, Eurostat Yearbook 2002

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Internationally comparable statistics on education, training and skills: current state and prospects

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Comparable statistics on education, training and skills are not only used by research and analysis to provide explanation and evidence of the functioning of European labour markets and of education and training systems, but also to construct indicators comparing EU Member States, comparing the EU with competitors and assessing the achievement of goals and benchmarks. Although substantial progress has been made, some essential data gaps still remain on issues such as expenditure on vocational education and training (VET), skill mismatches, outcomes of education and training systems, skill and competence levels of populations. Additionally, available data have various drawbacks that limit comparisons across countries and over time, existing sources are not always exploited sufficiently. The article aims to raise awareness of missing key data, and to increase transparency about available data sources, their potential and limits. In this respect, the annex gives a comprehensive overview of existing and forthcoming data sources.

Introduction

Internationally comparable data on education, training and skills have acquired particular importance with the growing together of European countries and the implementation of common EU policies and strategies. This data are also key to comparative research on education and training that aims at establishing an overview of education and training across countries.

Political and research interest in such data and the recognition of their key role for (European) economic and social policies are relatively new. Most developments in internationally comparable education and training statistics started in the 1990s. Therefore, international sources do not always (yet) provide the information required or long time series. Nevertheless, most sources are adapted constantly to cover upcoming needs. New sources and surveys are designed and the geographical coverage of international data is widening constantly. A number of research projects have also led to new concepts, methods, data and indicators that can be used by international organisations to improve available data and design new surveys ([1]).

Despite the substantial progress made in developing international statistics and indicators, missing or insufficient data and statistics still impede evidence-based policies, research analysis and informed decisions by individuals (e.g. for their educational or occupational choices). Indeed, comparable data on education, training and skills still suffer some drawbacks:

- a considerable set of key data needed by policy-makers and researchers is missing;
- many available data have not yet been fully exploited;
- many limitations exist in comparing data across countries and over time.

Cedefop's research and policy reports ([2]), for example, have discussed in detail several of these problems. The Maastricht Study (Leney et al., 2004) ([3]) has also analysed, in a differentiated way, existing data and their limitations for assessing progress made by Member States in achieving the Copenhagen objectives for VET.

Data required for policy coordination at European level

New methods of policy coordination at European level require structured and continuous support in the form of statistical indicators and benchmarks. Therefore, closing the knowledge gap about comparable statistics has become a priority for the European Union.

The Lisbon conclusions defined the open method of coordination (OMC) as a means of spreading knowledge of best practices and achieving greater convergence towards the main EU goals while respecting the breakdown of responsibilities envisaged in various EU treaties. The OMC is a new form of cooperation for the Member States, based on a fully decentralised approach relying on variable forms of partnership and designed to help them to progressively develop their own policies. It is based essentially on:

- identifying and defining jointly the objectives to be reached (benchmarks);

- commonly-defined yardsticks (statistics, indicators) enabling Member States to know where they stand and to assess progress towards the set objectives;

- cooperation tools to stimulate exchange and dissemination of good practices. ([4])

The OMC is applied in the field of education and training. It aims at stimulating mutual learning processes using indicators and benchmarks, comparing best practices and organising periodic monitoring, evaluation and peer reviews.

Following this policy need, the Maastricht Communiqué (2004) identified 'the improvement of the scope, precision and reliability of VET statistics' as a priority, arguing that 'adequate data and indicators are the key to understanding what is happening in VET and what additional interventions and decision-making are required by all parties involved'. In parallel, the setting up of the standing group on indicators and benchmarks (SGIB) by the European Commission ([5]) was an important step not only in extending the use of available data and statistics, but also in initiating improvements in their coverage and quality. It is also encouraging that the Commission has just established, in the Joint Research Centre at Ispra, a research unit on lifelong learning with a focus on data and indicators.

Assessment of current comparable data provision

The table annexed presents the different sources at international level that provide comparable data on education, training and skills. In this section these sources are assessed in the light of current policy and research needs for comparable data and some methodological drawbacks are identified to provide directions for future research and development.

Policy and research needs for comparable data on VET, learning and skills

Combining policy and research need analysis with a review of the different sources identifies several information gaps and areas for improvement in current comparable data provision ([6]).

Data on expenditure on, and investment in, education and training needs to be refined to distinguish between types of expenditure (in initial and continuing vocational training; in VET and general education), between public and private sources of funding (including individuals), between expenditure on institutions and other kinds of expenditure (e.g. learning materials, accommodation and commuting costs). According to Leney et al. (2004) there is very little information on expenditure on initial VET and what we have is not satisfactory. Some data may be provided by countries' administrations and international sources but expenditure on initial VET is usually included in expenditure on (all) educational institutions. The current indicator of public expenditure on education as a percentage of GDP, provided by the Unesco-OECD-Eurostat (UOE) questionnaire, does not distinguish type of education (VET versus general education). Expenditure on continuing vocational training (CVT) is currently restricted to companies: information on costs of CVT courses provided by enterprises can be obtained from continuing vocational training survey in enterprises (CVTS) but data is limited to sectors of economic activity covered and do not include other forms of training. Public expenditures in active labour market policy measures – including training – are available from the labour market policy data collection (Eurostat) and the OECD ([7]) labour market programme database. Finally, there is not much information on individual or family expenditure on education and for initial and continuing VET, in particular.

Simple indicators such as VET participation and graduation rates are currently not produced easily using the UOE questionnaire data although they would contribute to better understanding of factors contributing to reducing drop-out rates and supporting more young people to complete upper secondary education. Furthermore, indicators of completion of educational programmes duplicate each other and results are inconsistent. The two main sources on enrolment and educational attainment: the UOE data collection and the EU labour force survey (LFS) lack comparability, leading to major discrepancies, particularly when comparing upper secondary graduation at typical age (UOE) and youth educational attainment (LFS), reaching 18 % or more in some countries (Leney et al., 2004). Data on transitions

([1]) As an example, the site Research on Lifelong Learning attempts to provide a structured dissemination channel between researchers/expert educational statisticians and the European Statistical System by discussing results of comparative research projects that developed new statistical concepts, methods and/or data (http://www.researchonlifelonglearning.org/).

([2]) Information on the policy report and the three research reports published so far (1998, 2001, 2005) can be found on Cedefop's European Training Village (www.trainingvillage.gr) in the section Projects and networks: Policy report or Research laboratory.

([3]) Leney, T. et al. Achieving the Lisbon goal: the contribution of VET: final report for the European Commission. 15.10.2004. Available from www.refernet.org.uk/documents/Achieving_the_ Lisbon_goal.pdf [cited 13.9.2005]. A synthesis report has been published by Cedefop: Tessaring, M.; Wannan, J. Vocational education and training - key to the future: Lisbon-Copenhagen-Maastricht: mobilising for 2010. Luxembourg: EUR-OP, 2004.

([4]) http://europa.eu.int/comm/education/policies/pol/policy_en.html#methode; detailed work programme on the follow-up of the objectives of education and training systems in Europe (Council of the European Union, 2002).

([5]) The SGIB consists of experts proposed by the Member States and of other experts designated by the Commission.

([6]) The main characteristics of the data sources mentioned below are detailed in the table at the end of the article, including abbreviations.

([7]) Organisation for Economic Co-operation and Development.

of VET graduates to the labour market, post-secondary or higher education, as compared to graduates from other pathways, are also not currently available from a standard source. The data from the ad hoc module on transition integrated in 2000 in the LFS are not yet fully exploited.

More detailed data on mobility – not only geographical but also occupational, sectoral and social/intergenerational – are necessary to understand the dynamics of employment and unemployment in the European labour market. However, the LFS does not allow the degree of data desegregation necessary to study these issues in detail due to sample size limitations. It would also be useful for research if more detailed characteristics of unemployed people (particularly long-term unemployed) and of the 'hidden unemployed' ([8]) were available from the LFS. There is also no specific comparable data source on skill shortages and mismatches (e.g. qualification requirements of vacancies or skill needs analysis by sectors or occupations).

Detailed data on VET teachers, trainers, tutors and other staff involved in training, their individual characteristics (age, gender, skills, etc.), earnings, status, roles and duties are required given the emphasis on the profession in EU and national policies. Currently, only information on personnel in educational programmes is available from the UOE questionnaire.

Overall data on outcomes of VET, education and lifelong learning ([9]) to assess the efficiency and effectiveness of education and training systems, programmes and measures are missing. Currently there is no adequate source at European or international level to analyse these issues. The OECD programme for international student assessment (PISA) is a step in this direction as it measures students' skills in selected domains and draws conclusions on the factors influencing the performance of various education and training systems. However, currently there is no way to assess the specific outcomes of VET. The OECD international adult literacy survey (IALS) and the adult literacy and life skills survey (ALL) measure adult performance in selected skill domains and relate it to a number of labour market success variables ([10]). This kind of analysis, relying on skills levels, gives a better indication of the benefits of education and skills than the educational attainment level used in indicators derived from the LFS. Nevertheless, as is the case for PISA, the assessment of adult performance does not specify VET in relation to general education. Also it is limited to basic skills domains, as reliable and valid direct measurement exists currently only for literacy, numeracy and analytical reasoning.

Detailed data on lifelong learning are needed, covering types, subjects and duration of courses, training providers (including micro-enterprises, public service, etc.), characteristics of participants and non-participants, and impacts on further life, career and participation in learning activities. Data should also include 'non-traditional' forms of learning, such as self-organised, distance learning, e-learning, etc. The current LFS structural indicator on lifelong learning, with information on participation in a period of four weeks prior to the survey, underestimates the extent of adult participation. The CVTS is restricted to company-provided continuing training (enterprises of at least 10 employees), and to employed people. It excludes the public sector and some industries because of difficulties with data collection. Data on participants in CVT do not indicate individual characteristics of participants (except gender). They also exclude more informal and non-formal work-related learning such as job rotation or quality circles to cover only CVT courses. Nevertheless, the forthcoming adult education survey should resolve part of the information gap on lifelong learning.

Education and training: inputs and outcomes

Current sources provide mainly information on the input to education and training (participation, expenditure, provision, time, etc.). Only a few sources – mainly LFS and OECD – provide data on outcomes (educational attainment of populations, drop-outs, skill levels, earnings, etc.). Furthermore, most sources do not provide a clear and analytical picture of the relationship between inputs and outcomes, often because one source does not cover or focus on both ([11]).

Developing better data sources and indicators on the outcomes of various forms of education, training and skills would contribute to providing crucial data on vulnerable and disadvantaged groups and to giv-

([8]) People who would like to work under certain conditions but are not registered unemployed (Descy and Tessaring, 2001, p. 240).

([9]) Including non-economic benefits and externalities.

([10]) A programme for international assessment of adult competences (PIAAC) is also under discussion between the OECD secretariat and member countries.

([11]) The Eurobarometer surveys complete the current picture with some information on citizens' opinions regarding lifelong learning and vocational training.

ing indications on priority areas for policy intervention and learning provision. Current effort in this respect should be extended and more systematically supported by the EU and other international institutions; extensive research programmes on the issue should be financed.

A fragmented picture of education, training and skills

Such international sources as exist provide a fragmented rather than a comprehensive view of education and training. They only allow analysis of single aspects because information across sources is difficult to combine. Moreover, in many instances results from different sources provide different pictures of the same issue. This is due to several reasons:

- sources focus on different subjects (e.g. labour force characteristics in the case of LFS versus provision of training to employees for the CVTS);
- sources use different definitions of education, training or skills (depending on the unit, the subject, etc.)
- sources refer to different statistical units (e.g. education programme as in the UOE questionnaires, enterprises in CVTS, households in LFS, individuals in IALS);
- sources have a different periodicity (some data are available annually, others over a longer cycle);
- sources have different country coverage;
- in most sources, education, training or skills are not the main subject but just one aspect covered, which leads to limited coverage of education and training issues;
- finally, reliability cannot always be ensured if data refer to a small number of units or if various characteristics are combined (e.g. gender + skills + age + country + ...).

There are also limitations in obtaining or interpreting time series resulting from changes in concepts and definitions. For instance, the benchmarks 'early school leavers' and 'lifelong learning' were strongly influenced by major methodological modifications made by Member States over the past years to achieve harmonisation. For example, in 2003, France adjusted the reference period for participation in lifelong learning from one to four weeks. This doubled the participation rate compared with previous years. Comparisons are further hampered by the fact that countries have implemented changes at different times, thus making comparisons for a given year difficult (Leney et al., 2004).

Expected developments in future comparable data provision

Up to 2010, several new sources and/or survey cycles will be launched and will provide new data:

- the third CVTS (2006) will allow comparisons with data gathered in 1994 and 2000 and the identification of trends regarding training in enterprises;
- the adult education survey (AES, 2005-07) will provide comparable European data on participation in various forms of learning as well as obstacles to and attitudes towards learning;
- the EU-survey on income and living conditions (EU-SILC, 2004 onwards), is a longitudinal survey including variables related to income, poverty, social exclusion, living conditions, employment, health and education and training;
- the household budget survey (HBS, 2006), including education consumption expenditure, should provide further insights into households and individual spending on education;
- the third round of PISA (2006), will cover 58 countries and therefore provide a better understanding of the factors influencing the performance of education and training systems;
- the new OECD programme for international assessment of adult competences (PIAAC 2008-09), will pursue the efforts to measure the level of the adult population in selected skill domains while also assessing the use of selected skills in the workplace;
- the fourth trends in international mathematics and science study (TIMSS 2007), will pursue this cycle of internationally comparative assessments and provide data about trends in mathematics and science achievement over time;

❑ the second information technology in education study (SITES 2006) will focus on the impact of investments in ICT in education.

Waiting for these new data, a few sources available at European or international level could be exploited or exploited better as their full potential for analysis has not been investigated yet. This is, for instance, the case for the second continuing vocational training survey in enterprises, the ad hoc modules on transition and on lifelong learning included in the LFS in 2000 and 2003 respectively, the labour cost survey, the time use surveys, the labour market policy data collection and the OECD ALL survey. Although this will not provide the complete picture needed, nor directly address the gaps identified above, this may still provide new insights and understandings.

Conclusions

Despite significant progress in the provision and use of comparable data on education, training and skills, further developments at EU and international level are hampered by a lack of strong guidance and cooperation. The concrete roles and responsibilities of the various actors – Member States, several Directorates General of the European Commission, Eurostat, Cedefop, the European Training Foundation and other agencies – are not always clear and distinct. Thus, possible double work and deficits in cooperation, including with other international bodies such as OECD, Unesco or the International Labour Office, reduce the effectiveness and coherence of the process of data improvement.

The process of adapting current data sources and of developing new ones at European and international level should not only aim at filling gaps and covering upcoming needs. It should also have as an objective to improve methods and definitions across sources to form a congruent picture of lifelong learning in the EU and beyond.

One should also be aware that the provision of data specific for VET is not always an efficient option given the high survey and analysis costs and the relatively limited use of this information. Gathering data on VET should be embedded in the whole process of getting more reliable information on lifelong learning rather than a separate exercise.

Finally, the use of comparable European and international data by the research community is not as widespread as it could be. This is partly because comparable data may lose precision in the process of harmonisation; developing common concepts and definitions sometimes leads to deciding on lowest common denominators. However, the two main reasons may well be the difficulty in accessing the data and the lack of knowledge of existing data sources and their potential. In this respect, it is useful to note that Eurostat has recently provided free access to the New Cronos database where a number of predefined statistical tables and indicators are available, including structural indicators used in the framework of the Lisbon agenda ([12]) ([13]). Additionally, researchers may request from Eurostat access to subset microdata ([14]). The OECD also provides access to some datasets to the research community.

We hope that this paper will not also only increase transparency of various data sources and promote their usage, but also encourage researchers to have a share in their further improvements and in new developments.

([12]) http://epp.eurostat.cec.eu.int/portal/page?_pageid=1996,45323734&_dad=portal&_schema=PORTAL&screen=welcomeref&open=/&product=EU_MAIN_TREE&depth=1

([13]) The availability of (explanatory) metadata eases the use and interpretation of the statistics.

([14]) http://epp.eurostat.cec.eu.int/portal/page?_pageid=1913,32879116,1913_32879144&_dad=portal&_schema=PORTAL.

Main European and international data sources on VET, education and skills **Annex 1**

Data source	General subject	Statistical unit Periodicity Coverage	Key subjects related to VET and lifelong learning	Additional remarks
UOE questionnaire (UIS [Unesco Institute of Statistics]/OECD/ Eurostat)	Initial education and training	Educational programme Annual (since 1992) All countries covered by the three organisations (EU 25, EEA, OECD countries, candidate countries, south-east European countries).	Enrolment, entrants, graduates, educational personnel, public expenditure in educational programmes (taking place at least partly in schools), class size. ***Structural indicator 'Spending on human resources':*** Public expenditure on education as a percentage of GDP. ***Structural indicator 'Science and technology graduates':*** Tertiary graduates in science and technology per 1 000 of population aged 20-29 years. ***Long-term indicator:*** Pupils in upper secondary education enrolled in vocational stream.	– Secondary data from national administrative sources; – follows the ISCED97 ([15]) (1998-2003) and ISCED76 (1992-97); – breakdowns possible by level of education, sex, age, type of curriculum (general, vocational), mode (full-time, part-time), type of institution (public, private) field of study, nationality; – Eurostat collects further information for EU countries by region and on foreign language learning (Eurostat education questionnaires).
Continuing Vocational Training Survey (CVTS) (Eurostat)	Continuing vocational training (CVT) and initial vocational training (IVT) in enterprises	Enterprise with at least 10 employees in NACE sections C-K, O ([16]) Reference years: 1993, 1999; from 2005 onwards every five years (regulations) 1999: EU 25 (except Cyprus and Slovakia), Bulgaria, Norway, Romania 1993: EU 12.	*CVT:* Training policies, organisation and management of CVT, types of CVT, other forms of CVT beyond courses, participation, training hours, cost, fields and providers of CVT. *IVT:* Participants, cost.	– Breakdown of participants/hours by sex, of hours by external/internal courses, of costs by direct and indirect costs; – extension to IVT from 2005 onwards; – inclusion of missing NACE sections and enterprises with fewer than 10 employees not compulsory; – access to micro-data might be granted.
Adult Education Survey (AES) (Eurostat)	Participation in adult learning	Individual, age: 25-64 first round 2005-2007 EU Member States (21), Romania, Switzerland	Participation in formal/non-formal education and training inside/outside working hours, methods and subjects of informal learning, access to information, obstacles in participation, attitudes towards learning, use of ICT, self-reported language skills, participation in cultural and social activities.	– Different ways of implementing in countries (separate survey (13), inclusion of core AES in existing surveys (8), registers (2)); – follows ISCED97, LFS and ILO definitions/classifications; – breakdown by sex, age groups, level of education, employment status; – legal basis concerning statistics on lifelong learning under development.
Labour Force Survey (LFS) (Eurostat)	Labour market characteristics (e.g. employment, unemployment, inactivity, hours of work, occupation) and sociodemographic characteristics (e.g. sex, age, education) of the population	Individual (at least 15 years old) and household annual and quarterly data (since 2003) EU Member States, EFTA, Bulgaria, Romania (EU-10 since 1983, EU 15 since 1995, EU 25 since 1999/2000)	Revised core module on education (2003): participation in regular education and training, participation in courses and other taught activities, educational attainment. ***Structural indicator 'LLL':*** Percentage of the adult population aged 25 to 64 participating in education and training (whether or not relevant to the respondent's current or possible future job) in the four weeks preceding the survey. ***Structural indicator 'Early school leavers':*** Percentage of the population aged 18-24 with at most lower secondary education and not in further education or training. ***Long-term indicators:*** – Population aged 20-24 having completed at least upper secondary education – Unemployment rates of the population aged 25-59 by level of education – Population aged 25-64 having completed at least upper secondary education.	– Follows ILO definitions and recommendations; – education data follows ISCED97; – breakdown by age, gender, nationality, labour force status; – some data only for people up to 64 years old people; – access to micro-data might be granted.
Labour Force Survey-ad hoc module on lifelong learning (Eurostat)	Adult learning	Individual (at least 15 years old) In 2003 EU Member States, Bulgaria, Iceland, Norway, Romania, Switzerland	Educational attainment, participation in/outside formal education and training, fields of education and training.	– Breakdown by age, gender, nationality, labour force status; – access to micro-data might be granted.
Labour Force Survey-ad hoc module on transition (Eurostat)	Transition of young people from education to working life	Individual aged 15-35 In 2000 EU 15, Hungary, Lithuania, Romania, Slovenia, Slovakia	Employment/unemployment, occupational status, social origin, educational attainment, job mismatch.	– Breakdown by age, gender, nationality, labour force status; – repetition in 2006 under discussion.

([15]) http://www.unesco.org/education/information/nfsunesco/doc/isced_1997.htm

([16]) http://europa.eu.int/comm/eurostat/ramon/other_documents/intro_cpa1996/en.cfm

Data source	General subject	Statistical unit Periodicity Coverage	Key subjects related to VET and lifelong learning	Additional remarks
Community statistics on income and living conditions (EU-SILC) (Eurostat)	Income, poverty, social exclusion, living conditions, labour information, activity status	Individual (at least 16 years old) and household Annual from 2003/2004 onwards EU Member States; Iceland, Norway, Turkey from 2005	Educational attainment, current education activity, year when highest level of education was attained.	– Introduced to replace the ECHP (see below); – sociodemographic background variables; – cross-sectional and longitudinal data; – access to micro-data might be granted (delay of at least two years to the reference period).
European Community Household Panel (ECHP) (Eurostat)	Income, poverty, social exclusion, living conditions, employment, education and training, health	Individual (at least 16 years old) and household Annual 1994-2001 EU Member States, Iceland, Norway, Switzerland, new Member States, Bulgaria, Romania, Turkey	Participation in education and training, general education (duration, level), vocational training (duration, type, objective), educational attainment/age, language skills.	– Sociodemographic background variables; – longitudinal data; – follows ISCED76; – access to micro-data might be granted.
Labour Cost Survey (LCS) (Eurostat)	Level, structure and short-term development of labour costs	Enterprise or local unit with at least 10 employees, NACE sections C-K Four-yearly (since reference year 1996 according to regulation) EU Member States, Bulgaria, Iceland, Norway. Romania	Wages of apprentices, employers' contributions for apprentices, vocational training costs (excluding costs for apprentices).	– NACE sections A, B, L, O included in some countries; – LCS is part of the system on labour cost statistics.
Household Budget Survey (HBS) (Eurostat)	Household consumption expenditure on goods and services	Household every 5-6 years since 1988, next reference year is 2005 EU Member States, Bulgaria, Romania (1999)	Education consumption expenditure.	– Harmonisation of non-harmonised national data on consumption expenditure of private household; – breakdown by demographic and socioeconomic background variables; – low comparability across years; – low comparability across countries for education services; the variable may not be included in 2005.
Harmonised European Time Use Surveys (HETUS) (Eurostat)	Structure of time use, participation in activities, daily rhythm of the population	Individual (age varies across countries) Collected once for survey waves between 1998-2002 EU Member States (18 currently covered), Bulgaria, Norway. Romania	Time spent on education and training (classes and lectures, free time study).	– Statistics are based on non-harmonised national time use surveys; – breakdown by age groups, employment status, level of education, sex.
ICT household survey (Eurostat)	Household ICT usage	Household. Annual (first half of the year) since 2002 EU Member States	Use of Internet in relation to training and educational purposes (formalised educational activities, post education activities, other education activities).	– Based on legal act since 2004; – breakdown by age group, household type, objective 1 regions and other regions, type of formalised educational activities.
Structural Business Statistics (SBS) (Eurostat)	Business demography, labour and capital input, turnover, value added	Enterprise Annual since 1995 EU Member States, Bulgaria, Norway, Romania, Switzerland	Number of apprentices.	
Labour Market Policy data collection (LMP) (Eurostat)	Labour market policy	Labour market measures ('Public interventions in the labour market ... distinguished from other general public employment policy measures in that they act selectively to favour particular groups ...') Annual (since 1998) EU Member States, Norway	Targeted employment policies of the EU countries resulting from the 1997 agreement to launch the European Employment Strategy. Summary tables on public expenditure and participants (stocks and flows) by type of action and by country and on participation by type of measure. ***Long-term indicator:*** Labour market policy expenditure in active measures by type.	– Links to the OECD database on LMP; – active measures: training; job rotation and job sharing; employment incentives; integration of the disabled; direct job creation; start-up incentives; – passive measures: unemployment and early retirement benefits; – additional qualitative information on each labour-market policy measure; – public expenditure distinguished by direct recipient (individuals, employers or service providers) and by the way the expenditure is disbursed (e.g. cash payment and foregone revenue).

Data source	General subject	Statistical unit Periodicity Coverage	Key subjects related to VET and lifelong learning	Additional remarks
Labour market programme database (OECD)	Labour market programme (LMP)	Measures: active or passive since 1985 OECD member countries	Public expenditure on LMPs.	– All types of public spending, including national, regional and local; – excludes the private sector's spending on apprenticeship and other training. Similarly, training financed through payroll taxes is excluded; – active measures: public employment services and administration; labour-market training; youth measures; subsidised employment; measures for the disabled; – passive measures: unemployment compensation and early retirement due to labour-market reasons.
Programme for International Student Assessment (PISA) (OECD)	Student achievements	Young people aged 15 enrolled in an educational institution every 3 years OECD member and partner countries willing to participate: 43 in 2000, 41 countries in 2003, at least 58 countries in 2006	Measure of performance in selected skill domains: reading literacy; mathematics literacy, scientific literacy, problem-solving.	– Breakdown by sociodemographic background of pupil; home language; migration background; – background variables on teachers and schools.
International Adult Literacy Surveys (IALS) (Statistics Canada, OECD, Eurostat, UNESCO)	Adult literacy	Individual aged 15-65 1994, 1996, 1998 20 countries	Performance in selected skill domains (prose literacy, document literacy and quantitative literacy). Creation of comparable literacy profiles across national, linguistic and cultural boundaries. Participation in adult education and training.	– One of the most sophisticated surveys to measure adult literacy according to prose literacy (understand and use information for texts), document literacy (locate and use information contained in various formats) and quantitative literacy (apply arithmetic operations to numbers embedded in printed materials); – breakdown by demographic variables, work history, education level, earning, etc.
Adult Literacy and Life Skills Survey (ALL) (OECD)	Adult literacy and life skills	Individual aged 16-65 2003 Bermuda, Canada, Italy Mexico, Norway, Switzerland, the United States	Performance in selected skill domains (prose literacy, document literacy, numeracy, analytical problem-solving).	– ALL is a large-scale, international comparative assessment designed to identify and measure a range of skills domains: prose and document literacy, numeracy, and analytical reasoning/problem solving; – breakdown by demographic variables, work history, education level, etc.
Programme for international assessment of adult competences (PIAAC) (OECD)	Competences and their impact on social and economic outcomes for individuals and countries	Individual 3 cycles of 5 years gap. First results available in 2010 voluntary participating countries	Performance in selected skill domains; use of selected skills in the workplace.	Currently under preparation. The aim of PIAAC is to (a) identify and measure differences between individuals and countries in competences believed to underlie personal and societal success; (b) assess the impact of these competences on social and economic outcomes for individuals and countries; (c) gauge the performance of education and training systems in generating required competences; and (d) help to clarify the policy levers that could contribute to enhancing competences. The PIAAC first cycle will assess the skill level of the population in participating countries (literacy, numeracy, problem-solving, etc.) as well as the use of selected skills in workplaces using the job reporting approach.
Special educational needs: student with disabilities, learning difficulties and disadvantages (SENDDD) (OECD)	Special educational needs	Students with special educational needs 2-yearly (since 1999) all OECD countries (includes 19 EU countries)	Education and training provision, special schools, public/private institutions.	– Rely on secondary data from national administrative sources; – breakdown by level of education, settings of provision, gender, age, size of special schools, teacher/pupils ratios, public/private institutions, etc.
Civic Education Study (CIVED 1999) (International organisation for education assessment - IEA)	Students' knowledge of fundamental principles of democracy, understanding of citizenship, trust in institutions and nations.	All students enrolled on full-time basis in the grade in which most students aged 14 are found (grade 8 in most countries) 1996-97 (qualitative case studies); 1999-2000 (data collection) 24 countries in phase 1 (14 EU); 28 countries in phase 2 (17 EU)	Civic and citizenship knowledge, attitudes and behavioural tendencies of pupils, curriculum and classroom practices, school climate, teacher characteristics.	– Contextual data collected from students and through teacher and school questionnaires; – breakdown by gender, civic knowledge, civic attitude, civic behavioural tendencies; – additional survey of upper secondary school students in some countries.

Data source	General subject	Statistical unit Periodicity Coverage	Key subjects related to VET and lifelong learning	Additional remarks
Trends in International Mathematics and Science Study (TIMSS) (International Organisation for Education Assessment - IEA)	Assessment of students' mathematics and science achievement.	All students at several grade levels (4 years and 8 years of schooling + final year of secondary education) 1995, 1999, 2003, 2007 46 countries in 2003 (12 EU Member States + Bulgaria, Norway, Romania)	Performance in mathematics and science; attitudes and self-concept; curriculum and classroom practices; teacher and school characteristics.	– Breakdown by grade, gender, maths and science knowledge, attitudes and self-concept, home socioeconomic of pupils at grades 4 and 8; – extensive information about teaching and learning of mathematics and science collected from students, teachers and school principals.
Second on Information Technology in Education Study (SITES) (International Organisation for Education Assessment - IEA)	SITES-M1: Educational use of ICT SITES-M2: innovative pedagogical practices using ICT	SITES-M1: principals and technology coordinators in schools using computers at various grades (mandatory population: 14 years old); SITES-M2: teachers and learners in schools of grade 6, grades 7-9 and grades 10-12 SITES-M1: 1998-99; SITES-M2: 2000-01; next issue: 2006 SITES-M1: 26 countries (13 EU, Bulgaria, Norway.); SITES-M2: 28 countries (13 EU, Norway).	ICT in education related policies, teacher characteristics, pedagogical practices using ICT.	– Breakdown by grade; – SITES 2006 will deal with the impact of investments in ICT in education.
World Values Survey (WVS)	Worldwide investigation of sociocultural changes and values and beliefs of people in a particular society	Individuals more than 15 years old. Irregular; last European wave in 1999 1999-2001: 60 societies covering 6 continents (almost 60 % of the world's population), 24 EU countries	Surveys on a range of social, political and moral issues. Questions on citizenship and democracy.	Survey organised through a network of leading universities all around the world (about 80 countries).
Eurobarometer on VET (DG PRESS, DG EAC, Cedefop)	Opinion of EU citizens on continuing and initial vocational training	Individual aged 18 to 64 In 2004 EU Member States	Source of acquired knowledge and skills, forms of CVT during and outside working time, recent training and reasons, training policy in the workplace, guidance on and objectives of training, future training.	Breakdown by country and sociodemographic characteristics (e.g. gender, age groups, occupational status, subjective assessment of urbanisation).
Eurobarometer on lifelong learning (DG PRESS, DG EAC, Cedefop)	Opinion of EU citizens on LLL	Individual, at least 15 years old In 2003 (EU-15, Iceland, Norway) In EU 10 (new Member States)	Past learning experiences, learning preferences, obstacles and incentives, opinion on lifelong learning, important skills, learning conducive environment.	Breakdown possible by country and sociodemographic characteristics (e.g. gender, age groups, occupational status, subjective assessment of urbanisation).

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Linking vocational education and training research, policy and practice: a personal view

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After the failures of manpower planning, research shows that investment in primary and general secondary education yields greater returns than investment in more costly vocational/higher education. To be more effective, investment in vocational education should be more influenced by the individual with greater private sector provision. Macroeconomic policy is the key to reducing unemployment and, it can be argued, the EU has adopted the policy of lifelong education without sufficient reference to research in the field.

Introduction

Efforts to forecast future training needs date back at least 50 years. During this period, various models have been tried and have failed more often than they have succeeded. This article is divided into three parts: lessons from experience of forecasting training needs; recent research findings on the economics of training; and a discussion of possible training paths for an enlarged Europe. In closing, the article also briefly discusses links between formal school and training systems and the labour market. A list of references to academic literature on training is also provided.

The historical perspective

The post-World War II era was characterised by intensive economic planning activity. Developed and developing countries aimed to increase investment in physical capital to ensure economic growth rates. The methodological link between investment and economic growth was the so-called 'capital-output' ratio, a coefficient denoting the necessary amount of capital per unit of output. In the early 1960s the concept of the physical capital-output ratio was extended to include 'qualified' or 'high-level manpower', as it was known at the time. This was the necessary amount of scientists, engineers and the like needed to produce a unit of output in the various economic sectors (Table 1).

This manpower forecasting approach culminated in the Organisation for Economic Cooperation and Development's (OECD) Mediterranean Project, a major exercise in several countries attempting to predict, over future decades, the necessary skills for achieving economic growth targets (Parnes, 1962; OECD, 1965). The International Labour Office (ILO) and the World Bank used the manpower forecasting model extensively to advise countries on the skills needed for economic development and to design education projects to provide the necessary qualified labour (Psacharopoulos, 1991).

While nearly every education and labour ministry across the world had a unit engaged in manpower forecasting, two parallel developments were taking place. The Post Mortem of Manpower Forecasting project (POMF) carried out at the Higher Education Research Unit at the London School of Economics (LSE), under Professor Mark Blaug was set up to evaluate the accuracy of manpower forecasting. Comparing the many mature manpower forecasts to the actual situation, POMF gave the *coup de grâce* to manpower forecasting (Ahamad and Blaug, 1973). It revealed forecasting errors of thousands of percentage points, even for such occupations as teachers. The second development was the emergence of the field of human capital, and the economics of education in particular, originating from T.W. Schultz (1961) at the University of Chicago and Gary Becker (1964) at Columbia University, and followed up by Mark Blaug (1970) and others at the LSE and the University of Dijon in France. The core of human capital theory applies cost-benefit analysis to education and training. Early empirical applications showed that, for many countries, primary education was the priority, rather than high level manpower typically dictated by the application of manpower forecasting (Psacharopoulos, 1994).

There are many reasons for the two models yielding diametrically opposite recommendations regarding educational policy. The main one is that manpower forecasting does not

Typical manpower supply and demand table **Table 1**
Training needs in country X

Occupation	1988 Manpower stock (supply)	2003 Manpower requirements (demand)	1988-2003 Training needs (demand minus supply)
Electrical engineer	10 000	12 000	2 000
Mechanical engineer	15 000	18 000	3 000
Foreman	20 000	24 000	4 000
Supervisor	15 000	16 000	1 000
Skilled worker	50 000	60 000	10 000
Middle-level technician	30 000	35 000	5 000
Etc.	...	...	...

Social returns to education by level and curriculum type **Table 2**

Educational level/type	Rate of return (%)
Primary	18,9
Secondary	13,1
- General	15,5
- Vocational	10,6
Higher	10,8

Source: Psacharopoulos and Patrinos (2004), and Psacharopoulos (1994).
Note: Figures are world averages.

take into account the relative costs of providing different levels of qualified manpower. Moreover, the benefits side of manpower forecasting is in terms of the number of heads of people, rather than the relative productivity of each head. In addition, manpower forecasting does not take into account substitution possibilities between different kinds of skill, let alone substitution between capital and labour. Most of all, manpower forecasting is a static model, completely disregarding dynamic changes in the economy which are the driving force of economic growth.

Largely because of the findings of the POMF project and similar accumulated evidence, by the late 1980s the World Bank and ILO had stopped using the manpower forecasting model to recommend education and training policies to given countries. As a result, the lending profile of the World Bank changed to promote primary education, at the expense of university education and, especially, secondary vocational education (World Bank, 1991).

Economics of training: recent research findings

To a non-economist, the lessons of the above history may seem strange. Every country needs doctors, teachers, plumbers, carpenters, priests and artists. (The last two occupations were actually included in the Mediterranean Regional Project). What is wrong with attempting to forecast their numbers so that universities produce the right amount of doctors and vocational schools the right amount of carpenters? The problem with such forecasting is that there is plenty of research evidence showing that universities and vocational schools ought not to be a priority in several countries (Psacharopoulos, 1987). Figures in Table 2, from the human capital literature, show that the size of the economic rate of return on investment in education is inversely related to the level of education. Primary education should, therefore, be a priority in countries where the coverage at this level is not universal; this should be followed by secondary education and then university. It is interesting to note that application of the manpower forecasting model would give the exact opposite recommendation.

Within levels of education, general secondary education is more profitable than vocational education. The reason is that, whereas general and vocational secondary school graduates have more or less equal earnings after graduation, the vocational track of secondary schools costs about twice as much as the general track (Psacharopoulos and Loxley, 1985). This finding led the World Bank to change its lending profile as recently as 1991 away from secondary vocational schools, an activity in which the institution had been engaged almost exclusively since its inception (World Bank, 1991).

Beyond the formal school system, a very robust research finding is that retraining programmes for the unemployed are ineffective (Heckman et al, 1999). The costs of such programmes grossly exceed the benefits, as measured by the length of time needed for a graduate of such a programme to find a job, and by the earnings differential of those who graduate from the programme relative to those who do not. Recent research has also shown employers want to hire workers with very general, rather than specific, skills (Table 3), because they are easier to train relative to other workers. General skills, as identified by Murnane and Levy (1996) make workers easily trainable for occupations unforeseen by the manpower forecaster.

A related research finding concerns the importance of institutions. Unemployment might not result from lack of skills, but may just reflect the high cost of hiring labour. It is generally accepted that the role of the state is to

maintain a healthy macroeconomic environment conducive to growth. However, the state can act as an inhibitor, rather than a catalyst for employment promotion, by increasing the cost to firms of hiring labour. In some countries, employee labour costs are twice workers' wages, the non-wage labour costs in effect being a tax on employment (Table 4). In addition, strict employment protection legislation against dismissal can also act as a disincentive to recruitment.

Where possible, state financing of vocational education and training should be separated from the delivery of training services that could be provided more efficiently by the private sector (Figure 1). Giving candidate trainees vouchers will enable them to buy the kind of training they feel they need in the vocational training institution of their choice best fitted to their interests. To ensure transparency and quality in the training market, as well as support informed decision-making by training 'consumers', it may be necessary for private sector training providers to be licensed or approved. However, in these circumstances, the principal assurance of quality is competition. Since private training schools depend on the revenue collected as fees paid by the students, good ones flourish, and bad ones close down. The indirect flow of funds can also have significant redistributive power if a higher value of training voucher is given to poorer trainees.

Quality is an issue that is increasingly emphasised, in contrast to the days of manpower forecasting which deals only with the number of trained workers needed to achieve production targets. There are two ways of measuring the quality of training. One is the input method, measuring the amount of resources spent per trainee. However, a high level of spending may indicate inefficiency, rather than higher quality (Hanushek, 1981). Consequently, emphasis has shifted to the output method, measuring quality by the time needed to find a job after training, and the earnings of trainees compared to a control group of non-trainees.

In evaluating the quality of training, control groups are extremely important but often completely disregarded by many practitioners. There are two methods of establishing a control group. The first is to include in the employment outcome regression a host of independent variables to take account of the differences in trainees and non-trainees. The second is by random assignment of a group of potential trainees to the course that is under evaluation. Although random assignment is difficult to achieve in practice (how do you refuse to put someone on a particular programme when his/her neighbour has a place?), it remains the most valid construction of a control group (Heckman and Hotz, 1989; Ashenfelter and Card, 1985; Ashenfelter, 1986, Ashenfelter and Lolonde, 1997).

Worker characteristics sought by employers — **Table 3**

Basic reading ability	Ability to work in groups
Basic arithmetic ability	Ability to communicate
Basic problem solving ability	Basic computing ability

Source: Based on Murnane and Levy (1996)

Labour protection measures — **Table 4**

Country	Wage share in labour cost (%)	Strictness of protection against dismissal (index)
Germany	55	10
Spain	55	15
Ireland	71	3
United Kingdom	71	2

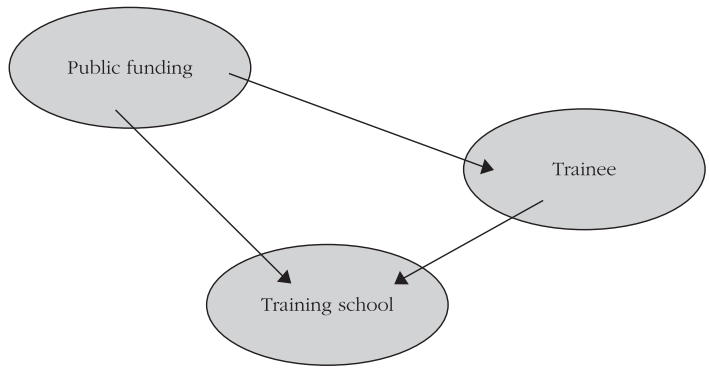
Source: OECD (1997), Tables 25 and 31.

Training paths for an enlarged Europe

There is a large gap between Europe and the United States in analytical work on training issues, and human capital in general (Psacharopoulos, 1999, 2000). Scanning the list of references in European literature on training produces mainly descriptive material. There are few references to James Heckman, Nobel Prize winner for his work on the selectivity problem of how to establish a proper control group for evaluating training. Nor is there adequate reference to the work of Nobel Laureate Gary Becker, who conceptualised the difference between general and specific training, and the implications of this distinction regarding the distribution of the training costs between the worker and the employer. This is, perhaps, symptomatic of the mutual failure of economists and educationalists in training policy and practice to talk and listen to each other sufficiently. Economists may sometimes appear to overlook institutional and cultural factors, while those in training policy and practice are not always familiar with the work of economists in this field.

As a result, the EU has embraced the concept of lifelong learning, but without analysing

Direct versus. indirect funding **Figure 1**



the duration of training, who will provide it and, above all, who will finance it.

Education systems and the labour market

Under the EU treaty, each Member State is responsible for its own education and training policy. However, the EU has missed the opportunity to document in a rigorous way the true training gaps in its Member States. It might be thought that general education is well developed in Europe, so what is at stake is specialised training. Yet several literacy studies, including the International Adult Literary Survey (IALS, 2003) and the PISA (OECD, 2004) study have found a surprising degree of functional illiteracy in some countries (OECD, 1998). In the UK, for example, one out of five adults could not locate a plumber in their city's yellow pages (Moser, 1999). A European research project, 'Low skills: a problem for Europe' (European Commission, TSER) also found a substantial number of people in the European labour market with low levels of educational attainment.

The key to the unemployment problem should be sought in providing a macroeconomic environment conducive to growth. This means monetary and fiscal policies to lower the cost of labour and remove barriers to competition. Schools should ensure students are literate and numerate before they are channelled into welding or carpentry. Schools should teach communication and social skills rather than courses leading to specific occupations. Specialised training could be provided in dedicated vocational schools, away from education ministries. Incentives should be also given to firms for providing training on the job.

Where large pockets of functional illiteracy exist, priority should be given to adult literacy programmes, rather than specialised vocational training. However, such literacy may be usefully combined with the teaching of other vocational skills. Functionally illiterate adults often require incentives and motivation to learn. Developing a vocational skill can often provide intrinsic motivation (a realisation that comes from within the student) to improve literacy and numeracy, as the student perceives their importance for the skill area studied. Learning a vocational skill can often lead to improvement in literacy and numeracy that has not been achieved in an academic classroom setting.

Conclusions

Where possible, the financing of education by the state should be separated from the delivery of training services that could be provided more efficiently by private firms. Training programme schemes should be evaluated. Competition should be given greater scope to regulate the quality of private-sector-provided training. Government training programmes should be evaluated rigorously by establishing control groups, as outlined above and subjecting the employment outcomes to cost-benefit analysis.

Given the speed with which the EU addresses education and training issues, and the recent enlargement of its membership, it is not sure that training issues will receive the analytical rigour they deserve in the near future.

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Key words

Illiteracy,
general/specific skills,
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human capital,
educational policy,
financing of education.

This section has been prepared by
Anne Waniart,
and the Documentation Service with the help of the members of the European network of reference and expertise (ReferNet).

This section lists the most important and recent publications on developments in training and qualifications at an international and European level. Giving preference to comparative works, it also lists national studies carried out as part of international and European programmes, analyses of the impact of Community action on the Member States and national studies seen from an external perspective.

Reading selection

Europe International

Information, comparative studies

From education to work: a difficult transition for young adults with low levels of education.
Organisation for Economic Co-operation and Development
OECD; Canadian Policy Research Networks. CRPN
Paris: OECD, 2005. - 114 p.
ISBN 92-64-00918-3

This book presents the results of the project on Young Adults with Low Levels of Education, conducted jointly by the OECD and the Canadian Policy Research Networks. It examines the extent to which young men and women with low levels of education are marginalised, the role family background plays in making it possible to complete the recognised minimal level of education, and how immigrants overcome the cultural and language gaps to find employment.
http://new.sourceoecd.org/education/9264009183

International handbook for cooperative education: international perspective of the theory, research, and practice of work-integrated learning / Richard Coll and Chris Eames (eds.)
World Association for Cooperative Education - WACE
Hamilton: WACE, 2004. - 300 p.
ISBN 0-9753564-0-2

The International Handbook for Cooperative Education brings together authors from around the world to provide a multidimensional perspective on work-integrated learning. It has documented, perhaps for the first time ever, the state of the art in educational programmes that incorporate periods of required work that integrate with classroom study. It will be of value to the beginner in the field as a background resource as much to those who have been long involved in cooperative education. The Handbook has four sections: Section 1 presents history, theoretical ideas and perspectives on research and assessment; Section 2 emphasises practice and presents a series of chapters focused on work-integrated learning in particular subject domains, written by practitioners engaged in doing it; Section 3 examines the benefits of cooperative education for the three parties involved, namely students, employers and educational institutes; and Section 4 looks to the future to provide readers with a view of where cooperative education may take them.

European Union: policies, programmes, participants

Lifelong development of competences and qualifications: roles and responsibilities / organised jointly by the European Training Foundation, Cedefop, the Federation of Greek Industries, and the Greek General Confederation of Labour, under the auspices of the Greek Presidency of the EU.
Athens: [s.n.], 2004. - 08 p.

The main objective of the conference was to raise awareness and stress the importance of the issue of lifelong development of competences and qualifications of the workforce in and across the Member States of the EU and the candidate countries. This was considered to be crucial in achieving the Lisbon European Council strategic goals and making Europe 'the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion'.
http://libserver.cedefop.eu.int/vetelib/eu/pub/cedefop/internal/2004_0011_en.pdf

Quality assurance in VET: building sustainable cooperation: discussion paper for the DGVT meeting of 18-19 April 2005. European Commission. Directorate General for Education and Culture
Brussels: European Commission, 2005. - 07 p.

The purpose of this paper is to outline the need to develop a coherent, structured and sustainable basis for embedding quality assurance (QA) in VET in and across Member States, building on the achievements made so far through European cooperation in this field. This is a crucial issue to increase transparency and consistency between Member State QA initiatives within and across EU countries, on a continuous basis.
http://libserver.cedefop.eu.int/vetelib/eu/pub/commission/dgeac/2005_0048_en.pdf

Career guidance: a handbook for policy makers.
Organisation for Economic Co-operation and Development - OECD
European Commission
Paris: OECD, 2004. - 78 p.

This joint publication of the OECD and the European Commission gives policy makers practical tools to tackle weaknesses in many countries' career guidance systems including limited access, particularly for adults; failure to develop career management skills; inappropriate training; and poor service coordination. In simple, non-technical language, this publication addresses a broad range of policy issues that are central to the effective delivery of career guidance services. These include: how to widen access to career guidance; ways of improving the quality of career information; ensuring that staff qualifications meet policy objectives; and improving strategic leadership.

Forco-precanet: Πανόραμα της net-οικονομίας στη νότια Ευρώπη. Panorama inédit des cadres de la net-économie en Europe du sud.
[Unpublished survey of net economy executives in Southern Europe]
Université de Toulouse-Le Mirail
Centre d'Etudes et de Recherche Techniques, Organisations, Pouvoirs; Certop.
Toulouse: Certop, 2005

These are the results of a survey conducted on 30 Net Economy Executives in Cyprus, Spain, France, Greece and Italy, and on the status and functions of further training for qualified personnel in the net economy.
http://www.diakrisi.gr/EnWebPages/FORCOPRECANETRESULTS.html

Mobilising the brainpower of Europe: enabling universities to make their full contribution to the Lisbon Strategy.
Commission of the European Communities
Luxembourg: EUR-OP, 2005. - 12 p.
(Documents COM; (2005) 152 final of 20.04.2005)

This report sets out ways in which the strengthening of three poles of Europe's knowledge triangle (education, research and innovation) can be achieved. This, according to the paper, can be done by investing in the modernisation and quality of universities, making this a direct investment in the future of Europe.
http://libserver.cedefop.eu.int/vetelib/eu/leg/eurodoc/2005/com_2005_0152_en.pdf

Conclusions by the Council of 21 February 2005 on Education and Training in the framework of the mid-term review of the Lisbon Strategy.
Council of the European Union
In: Official Journal of the European Union C 85 of 07.04.2005, p. 1-4
Brussels: Council of the European Union, 2005

The Council of the European Union recommends that in preparation for the next joint report of the Council and Commission to the European Council in 2006, further action be taken at European and national level, having regard to the Lisbon Mid-Term Review according to the priority levers of 'Education and Training 2010', as they were stated in the 2004 Joint Interim Report (focus on reform and investment in the key areas for the knowledge-based society, making lifelong learning a reality, establishing a European area of Education and Training).
http://libserver.cedefop.eu.int/vetelib/eu/leg/eurodoc/2005/0122_en.pdf

From the Member States

AT **Qualität durch Vorausschau: Antizipationsmechanismen und Qualitätssicherung in der österreichischen Berufsbildung / Lorenz Lassnigg, Jörg Markowitsch (Hrsg.)**
Innsbruck: Studienverlag, 2004. - 238 p.
(IBB - Innovationen in der Berufsbildung; 4)
ISBN 3-7065-4052-5

An important quality criterion of the Austrian system of vocational training is how well it adjusts to current economic and technological developments and whether it is permanently oriented towards the needs of the job market. Forecasting qualification and job market developments is therefore essential. But how can adjustments to future developments (skills matching) be guaranteed in the individual sectors, e.g. apprenticeship, vocational education at vocational schools and studies in the technical colleges of higher education? How do these individual subsystems work together and how does the overall system achieve this quality criterion? How innovative is Austria's training system? Can the quality of the interaction between training provision and workforce requirements be measured at all? The publication gives answers to these and similar questions, focusing less on specific skill gaps in Austria and more on fundamental political and economic structures and functional features which could help to prevent such gaps in the first place.

BG **Reviews of national policies for education: Bulgaria: science, research, technology.**
Organisation for Economic Co-operation and Development - OECD
Paris: OECD, 2004. - 92 p.
ISBN 9264007008 (en); ISBN 9264007016.(fr)

This review presents an overview of the S&T sector in Bulgaria and its links to education. Topics covered include the legislative framework; institutional arrangements for research and teaching; budgeting mechanisms; regional and international cooperation, including EU policy initiatives; and the impact of brain drain and ageing on human resources. Sample case studies and best practices in S&T policy-making are provided to illustrate the analysis. The final chapter includes a series of recommendations.

CZ **Vocational education and training in the Czech Republic: thematic overview / [František Barták et al.]**
Prague: ReferNet Czech Republic, 2004. - 74 p.

The publication provides information on the general policy context of vocational education and training in the Czech Republic (framework for the knowledge society), policy development, institutional framework, initial vocational education and training, continuing VET for adults, training VET teachers and trainers, skills and competencies development and innovative pedagogy, validation of learning (recognition and mobility), guidance and counselling for learning, career and employment, financing (investment in Human Resources), and on the European and international dimension - an open area of lifelong learning.
http://www.refernet.cz/dokumenty/to_english.pdf

DE **Vocational training for Europe: European Qualifications Framework (EQF) and European Credit Transfer System for Vocational Education and Training (ECVET): position of the German Central Business Associations and proposal for a EQF and ECVET model.**
Kuratorium der Deutschen Wirtschaft für Berufsbildung - KWB
Bonn: KWB, 2005. - 22 p.

The EU Member States' closer cooperation in education and training - as stated in the Bologna process (higher education) and the Copenhagen process (vocational education and training) - are proof that national education and training policies are increasingly influenced by EU education policy initiatives launched at European level. Although these initiatives are not legally binding and only give recommendations to the Member States, they will in the medium term have a considerable, even fundamental impact on national decisions and will also set the course for far-reaching changes in national education and training systems. That is why the German central business associations call for immediate action. They want to contribute to the process of creating a European area of lifelong learning and employment, according to the Lisbon Strategy. In this con-

text, the 'dual' – that is, practice-oriented – vocational education and training system should be given its proper place in Europe. To achieve this aim, an efficient concerted action by all relevant stakeholders in Germany is required.
http://www.kwb-berufsbildung.de/pdf/2005_Positionspapier_EQF_ECVET_englisch.pdf
http://www.kwb-berufsbildung.de/pdf/ 2005_Positionspapier_EQF_ECVET.pdf

DK A framework for qualifications of the European higher education area / Bologna Working Group on Qualifications Frameworks.
Copenhagen: Ministry of Science, Technology and Innovation, 2005. - 197 p.
ISBN 87-91469-54-6

This report concerns the elaboration of qualifications frameworks as called for by ministers in the Berlin Communiqué; it makes recommendations and proposals for an overarching Framework for Qualifications of the European Higher Education Area (EHEA), and offers advice on good practice in the elaboration of national qualifications frameworks for higher education qualifications. The report includes six chapters that cover: 1. The context – higher education qualifications in Europe; 2. National frameworks of qualifications in higher education; 3. The framework for qualifications of the European Higher Education Area; 4. Linking frameworks of qualifications in higher education; 5. Frameworks for higher education and for other educational areas; 6. Conclusions.
http://www.bologna-bergen2005.no/Docs/00-Main_doc/050218_QF_EHEA.pdf

EL Education and inequality in Greece / Panos Tsakloglou, Ioannis Cholezas.
Bonn: Institute for the Study of Labour, 2005. - 36 p.
(Discussion paper; 1582)

In public discourse, education is usually seen as the main vehicle for the promotion of social equality and social mobility. The paper surveys the existing literature and concludes that the relationship between education and inequality in Greece is strong. Inequities are evident at all levels of the education system, especially as regards access to the most rewarding level, university education. Many facets of the inequities observed in the labour market are associated with education, which appears to be the single most important factor shaping overall distribution of income and influencing the probability of poverty. Nevertheless, many links between education and inequality have yet to be examined in detail. (From the book abstract).
ftp://ftp.iza.org/dps/dp1582.pdf

ES Formación profesional: titulaciones.
[Vocational Training: professional titles]
Ministerio de Educación y Ciencia - MEC
Madrid: Subdirección General de Publicaciones, 2005. - 1 CD-ROM
ISBN 84-369-3685-X

This is a presentation of the Catalogue of Professional Qualifications available through Formal Vocational Training. This catalogue contains professions related to all production systems, offering a total of 142 training cycles at both the intermediate and advanced levels, specifying with each activity the legislation that regulates it, the class hours included in the cycle, the training plan, professional skills obtained upon completion of the cycle, and jobs that may be performed.

FI Competence-based qualifications: 1st January 2004.
National Board of Education
Opetusministeriö - OPM
Helsinki: Opetushallitus, 2004. - 286 p.
(Competence-based Qualifications; 5)
ISBN 952-13-2024-9

This publication contains descriptions of each competence-based qualification with the Requirements of the Competence-based Qualifications that had been adopted at the beginning of 2004. The titles of other competence-based qualifications are listed. The qualifications descriptions are concise; additional information about competence tests and their vocational skills requirements can be found in the respective Requirements of the Competence-based Qualification. It contains basic information about Finnish competence-based qualifications included in the qualifications structure till the end of 2003. There is a description of each qualification's modules, the main aspects of the vocational skills required for the qualification and the jobs available for those who have completed a qualification. Those qualifications which have been approved for the qualifications structure but where the requirements are yet to be confirmed, are referred to by title.
www.edu.fi/julkaisut

FR Formation en alternance: le repli des entrées en contrat de qualification s'est amplifié en 2003 / Ruby Sanchez.
[Alternance training: the decline in qualification contracts grew larger in 2003 / Ruby Sanchez.]
In: Premières informations et premières synthèses No 07.4 (Février 2005), 6 p.
Paris: DARES, 2005
ISSN 1253-1545

With a drop of 11 % in 2003, the number of new qualification, adaptation and orientation contracts declined for the third consecutive year. This decline was more pronounced in the industrial sector. The main reason for this trend was a drop in the number of young persons from 16 to 25 seeking a qualification contract. The total number of adults going in for qualification contracts remained low, but rose by 2 % compared to 2002.
http://www.travail.gouv.fr/publications/picts/titres/titre2333/integral/2005.02-07.4.pdf

Les acquis de l'expérience: dossier: deuxième partie / sous la direction de Philippe Astier [et al.].
[The achievements of experience: dossier: part II / under the direction of Philippe Astier [et al.].
In: Education permanente No 159 (Avril-Mai-Juin 2004), p. 7-116
Arcueil: Education permanente, 2004
ISSN 0339-7513

Two issues of the journal are dedicated to the validation of professional experience. The subjects dealt with are the analysis of experience, its reproduction, evaluation and formalisation. The first part of the dossier covers the following areas: Does experience have a training effect? The validation and measurability of skills acquired through experience. Validating skills acquired through experience: a new approach and new steps on the road towards qualification. The ethics of evaluation. From the gesture to the word: towards an equitable evaluation of professional experience. How can skills be evaluated for the purpose of certification? Another evaluation, another validation of experience. The doubt, the concept and the collective. The validation of experience as a new springboard for training. Between intention and reality: obstacles to validation.

IE Skills requirements of the digital content industry in Ireland, phase 1: a study by FÁS, in conjunction with STeM Research Centre, DCU, for the Expert Group on Future Skills Needs / Joan McNaboe.
Dublin: FÁS, 2005. - 122 p.
ISBN 0-947776-34-6

The digital industry encompasses three sectors - games, wireless and e-learning and currently employs 4,000-5,000 persons. Previous reports which identified the opportunities the digital industry represented for Ireland, also found there was a shortage of technical skills. Nine families of skills were identified, with the majority of employees working in the Media Authoring and Quality assurance testing families. Although the availability of staff is not a major concern, there are areas where skills gaps occur. In particular there is a need for a mixture of technical, business - particularly sales - and creative skills. Business and communication skills should be included in the curriculum of both technical and creative courses. The report also suggests revising some computing courses to encompass elements of the digital content industry, such as wireless or games.

LT Viesbuciu ir restoranu sektoriaus studija.
[A study of hotels and restaurants sector in Lithuania.]
Vilnius: Profesinio mokymo metodikos centras, 2004. - 59 p.

The study was prepared during the Phare 2001 project 'Framework of Qualification Standards' based on the results of research of the hotels and restaurants sector. The research aimed to assess the turnover of employees and the need for training in the upcoming five-year period by analysing development trends of the sector, in Lithuania and other countries, and to work out recommendations for the improvement of the balance between the labour force supply and demand. The study contains information about employment trends, key factors affecting development of the sector, changes in the employment and employment forecasts and training of employees for the sector. Study information on international trends in the sector was also prepared.
http://www.pmmc.lt/PMIT/doc/Viesbuciu-studija.pdf

LU Vocational training reform in the Grand-Duchy of Luxembourg / Aly Schroeder.
Luxembourg: Ministère de l'Education, 2005. - 22 slides

This is the contribution of Luxembourg to the meeting of the Directors-General for Vocational Training (DGVT) held in Luxembourg on 18-19 April 2005. The Luxembourg government is now preparing a coherent and integrated educational and training policy strategy within the framework of lifelong learning. The introduction of a modular approach aims at facilitating the adaptation of training provision to existing needs and at motivating learners, who should be continually guided towards new learning thresholds. The validation of prior learning should enable those, who have interrupted their formal learning process, to return to training, and those who have gained experience informally to engage in training without having to go through the full programme. Lifelong learning and guidance will aim to help adults avail themselves of new opportunities.
http://libserver.cedefop.eu.int/vetelib/eu/pub/council/2005_0057_en.ppt

NL Attracting, developing and retaining effective teachers: OECD activity update of country background report for the Netherlands.
Ministry of Education, Culture and Science - OCW
Den Haag: Ministerie van Onderwijs, Cultuur en Wetenschappen, 2005. - 5 p.

During the past decade, surpluses of teachers in primary and secondary education have turned into serious shortages. This is due mainly to an increase in the number of teachers retiring, an increase in student enrolments, a reduction of class sizes in primary education, the insufficient supply of qualified teachers and a low level of teacher retention. In general, the labour market for more highly educated employees became tight in the years of economic boom, which caused fierce competition between the various sectors of the labour market. Dutch people regard teacher shortages as the most important cause for concern with regard to education. Several measures have been taken to attract, develop and retain competent teachers. These measures all fit into a broader education policy, aimed at enhancing the quality of education, promoting equal opportunities and making education more effective. Schools and their staff play an important role in achieving these goals. Greater emphasis will therefore be placed on the responsibility of individual institutions and the people working in them. The overall tendency has been towards devolving certain responsibilities from the level of central government to the level of education organisations.
http://www.oecd.org/dataoecd/34/50/31354231.pdf

NO Lifelong learning in Norwegian working life: results from The Learning Conditions Monitor 2003 / Nyen, Torgeir; Hagen, Anna; Skule, Sveinung.
Forskningsstiftelsen Fafo - FAFO
Oslo: FAFO, 2004. - 60 p
(Fafo report; 443)
ISBN 82-7422-439-6
ISSN 0801-6143

This summary report presents indicators and main results from the Learning Conditions Monitor 2003 in a brief and easily accessible way. A basic report with more information on the data basis, questionnaires and register data, as well as the methods and analysis techniques used, is also available ([*Livslang læring i norsk arbeidsliv. Resultater fra Lærevilkårsmonitoren 2003. Grunnlagsrapport.*]) The Learning Conditions Monitor is a broad survey of the conditions for learning and development of skills. The survey is conducted among a representative sample of persons of working age. It was conducted for the first time in 2003 and will be repeated in the years to come. Main areas: formal further education, courses and other training, learning through work, learning needs and learning obstacles, learning conditions profiles, groups with weak learning conditions.
http://www.fafo.no/pub/rapp/435/435.pdf

SE Knowledge lift: the Swedish adult education program aiming to eliminate low worker skill levels / James Albrecht, Gerard J. van den Berg, Susan Vroman.
Uppsala: IFAU, 2004. - 43 p.
(IFAU working paper; 2004:17)
ISSN 1651-1166

The Swedish adult education programme called Knowledge Lift is unprecedented in its size and scope, aiming to raise the skill level of all low-skilled workers towards the

medium level. This paper evaluates the effects of programme participation on individual labour market outcomes, notably employment and annual income, as well as on labour market equilibrium.
http://www.ifau.se/swe/pdf2004/wp04-17.pdf

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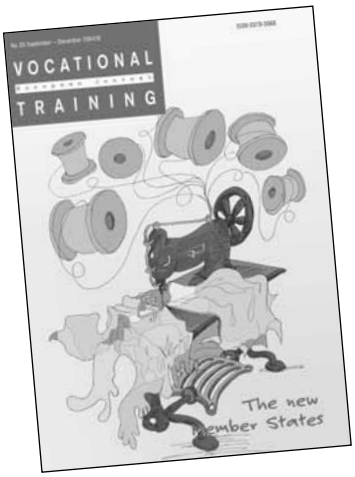

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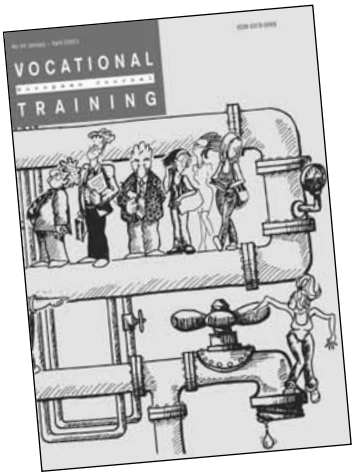

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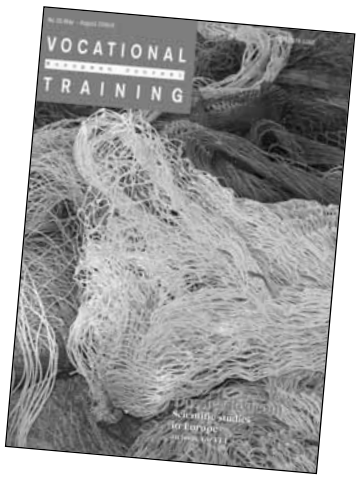

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