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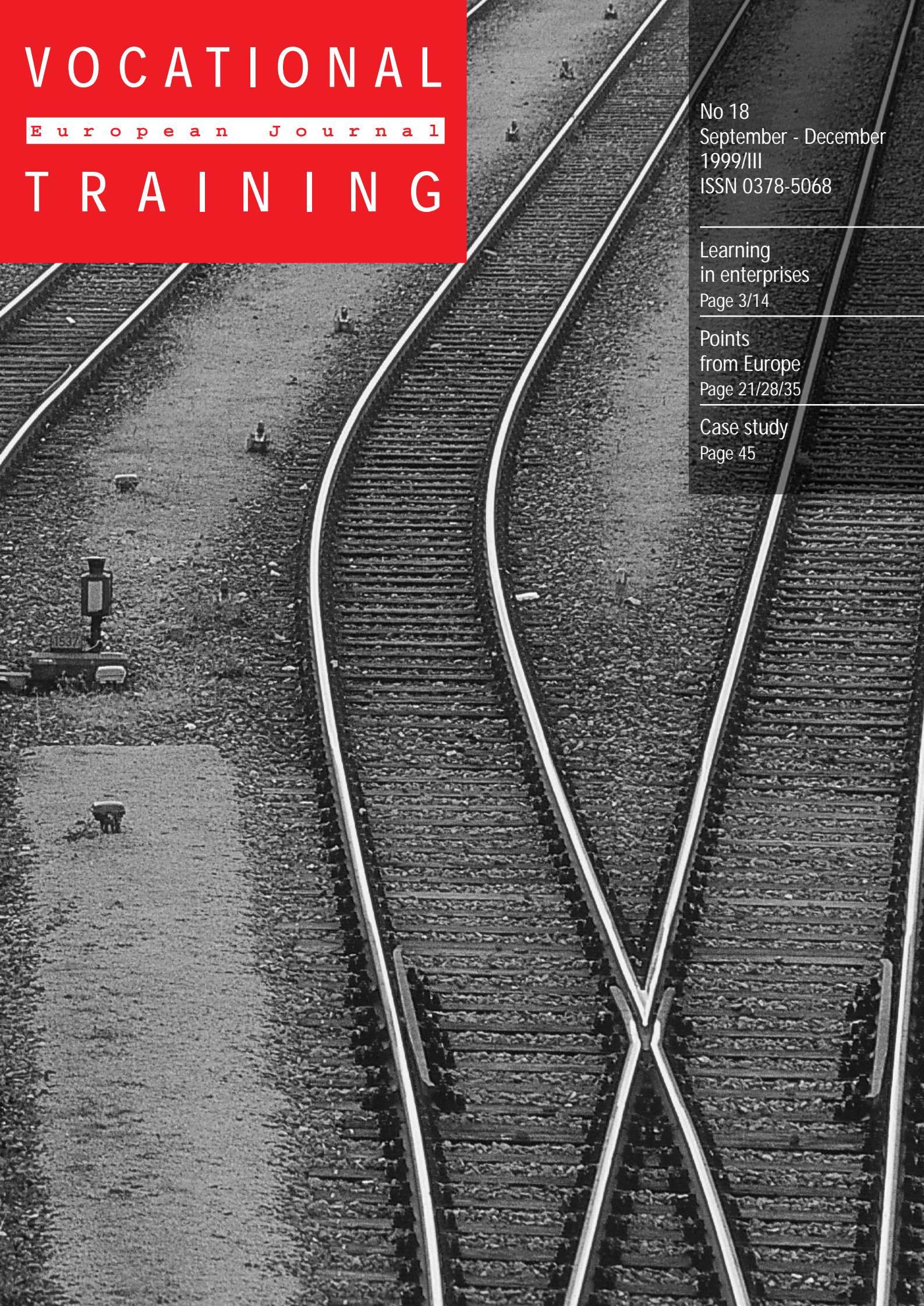
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CEDEFOP assists the European Commission in encouraging, at Community level, the promotion and development of vocational education and training, through exchanges of information and the comparison of experience on issues of common interest to the Member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

CEDEFOP is a link between research, policy and practice by helping policy-makers 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.

CEDEFOP's Management Board has agreed a set of medium-term priorities for the period 1997-2000. They outline three themes that provide the focus of CEDEFOP's activities:

- promoting competences and lifelong learning;
- monitoring developments in vocational education and training in the Member States; and
- serving European mobility and exchanges.

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Training, skills, learning: how can new models be developed?

Introduction

Our research, with J. Delcourt, into the role of enterprise in lifelong training (Delcourt, 1995) started from a clear-cut assumption: the 'new forms of labour organisation being developed in many European countries are likely significantly to change the ways in which training issues are addressed'. We therefore felt that we needed to carefully consider what developments and what micro-experiments were under way and to try to find out what they had in common.

We were nevertheless aware of the risks that an approach of this kind entailed: examining cases considered to be 'exemplary' by national observers provides little information on the rate at which such innovations are spreading or on their potential extent. A transverse summary of national cases should not lead to universalism (Kristensen, 1997). The development of new forms of labour organisation is linked to 'societal' characteristics (according to the formula of Maurice, Sellier and Silvestre, 1982) resulting from the relationships between the specific features of education and training systems (which vary greatly from one country to the next), the ways in which labour is organised and social groups are structured and the rules that underpin labour markets.

It now seems appropriate to compare the conclusions that we reached in 1995, based on studies conducted during the preceding two years, with current thinking and developments in Europe.

The main trends in labour organisation that J. Delcourt highlighted in his article seem for the most part to have gained ground and to have become more consolidated. Most observers now agree that there has been a major breakaway from Taylorist and Fordist models. It should nevertheless be stressed that this consolidation has not excluded further development of Taylorism in some industries, and even in some service activities.

These organisations are setting increasing and renewed store by employees' skills. At the time, we pointed out that the 'commercial product' had become the focus of work in order to highlight two dimensions. The 'product' dimension requires better coordination to ensure the quality of this product and an ability on the part of all those involved with this product to understand how they fit into and successfully play their part in the overall process by which this product is produced. The 'commercial' dimension stresses that this product has meaning only with respect to an identified market and customers. The result was that employees' work was being pervaded by managerial dimensions, in terms of cost, logistics and quality (specified for this or that internal or external customer).

This was leading to changes in the range and nature of the skills required. Far from declining, the demand for basic occupational skills was growing. This could be seen in particular by the fact that firms were stepping up their requirements when recruiting. Alongside this mastery of basic occupational skills, however,

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Following the articles on the role of enterprises in lifelong training published by E. Sauter and J. Delcourt in the Journal (No 16/99), we asked Philippe Méhaut for his opinion on this important issue.



“The development of training that is more integrated into working situations and of ‘lifelong’ skill development approaches raise three kinds of question that all have to be addressed at an individual level (the enterprise/the employee) and at a more systemic level. The first group of questions relates to the way in which training, work, employment systems and pay can be structured; the second group relates to the forms that this integrated training can take and the ways in which it can be implemented and the third group relates to the relationships between this integrated training and the formal training system.”

more attention was also being paid to other skills felt to be crucial for individual and group performance: an ability to adapt provided for instance by broader-ranging skills, team work abilities and all that that supposes in terms of communications (oral, written, via the mediums of the new information and communication technologies, etc.) and ‘managerial’ abilities both for the organisation of one’s own work and for more direct responsibility for management criteria (deadlines, costs).

These changes again raised the question of learning. The case studies showed, more or less across the board, that the issue of permanent learning linked closely to work situations was crucial to these new organisations. Obviously, not all the skills required were ‘new’ from the point of view of employees. What was happening was that the knowledge or expertise possessed by employees that had been disregarded in former types of organisation was now being recognised. These were skills that had merely been re-activated. Others, however, required training (in the formal sense of the term) or more informal learning based on trial and error, experimentation and pooled expertise. The ways in which knowledge was being acquired and passed on in these organisations were therefore being diversified and the pressures on individuals to play an active part in these processes was growing. Assuming that these new organisations were likely to develop (bearing in mind the socio-economic context described by J. Delcourt, 1999), we therefore put forward the hypothesis that all knowledge acquisition/development practices (including vocational training) were being called into question.

Each of these trends directly calls into question the role of work - and therefore of enterprise - in knowledge transmission and acquisition processes. They also call into question public training policies: on the one hand, some kind of collective regulation needs to be found if the whole burden is not to be borne by the individual and, on the other hand, this regulation is probably also necessary to avoid any risks of ‘market failure’ generated by enterprises’ under-investment in training because they fear that employees will quickly move on.

Theory and practice in many European countries seems to have moved in this direction. In France, there has been a lively debate, led in particular by employers, about competence-based approaches and the ways in which they should and can be developed in enterprise. This debate is to be found, albeit in different forms, in some northern European countries as well. Although its causes differed, the overhaul of certification frameworks in the United Kingdom with the introduction of the NVQ (National Vocational Qualification) system also raised the problem of developing and recognising skills acquired and tested in working situations. At Community level, the debate about lifelong training has been shaped by two issues: the times at which people acquire knowledge (the trend being towards knowledge acquisition throughout their working lives) and the methods by which this knowledge can be acquired (combinations of conventional training, self-training based on the new information and communication technologies and new forms of learning through experience).

The development of training that is more integrated into working situations and of ‘lifelong’ skill development approaches raise three kinds of question that all have to be addressed at an individual level (the enterprise/the employee) and at a more systemic level. The first group of questions relates to the way in which training, work, employment systems and pay can be structured; the second group relates to the forms that this integrated training can take and the ways in which it can be implemented and the third group relates to the relationships between this integrated training and the formal training system.

Links between training, work, employment systems and pay

For the first group of questions, it is possible to start from a simple model through which the various issues can be visualised.

The place that training occupies can be located through its relationships with the three components of the employment re-



lationship, i.e. the organisation (and the content) of work, job mobility and pay conditions. It is these systemic relationships that will promote or prevent the growth and viability of the new models.

Integrated training has close links with the dynamics of work organisation. It can be developed only if this organisation of work provides scope for it. In return, it is likely that it will help to develop this organisation. We mentioned above that there were strong trends towards growing skill mobilisation and also towards the construction of skills through work. In contrast to the Taylorist/Fordist model, there are therefore opportunities to step up the construction of skills through work. This is not, however, a one-way trend since it can be countered, as stressed by Sauter (1999), by contrary elements. More intense work may reduce the scope for integrated training if the obligation to achieve results becomes too strong. The short term then gains the upper hand over the long term, from the point of view of both the enterprise and the individual. The recent debate in France about the 35-hour working week is a good example of this: if training is not deemed to be time worked in negotiations to reduce working hours, there will be fewer opportunities for 'integrated learning'. Countries where young people's initial training includes a tradition of apprenticeship have an edge here because the need to provide this apprenticeship and cater for apprentices has an impact on organisational choices.

Integrated training has close links with the nature of employment and with the employment system in the enterprise. Dealing first with the nature of employment, to some extent, integrated training cannot exist or be viable unless there are groups that act as a support for exchanges and accumulation of knowledge. If these groups are unstable (use of temporary workers, sequences of part-time workers in the same job), transmission processes become more difficult. Similarly, the trend towards more individual and fragmented relationships with employers may have a negative impact. In France, for instance, the policy to develop jobs in the domestic sphere has been shaped partly by the self-employment that is being encouraged by measures such as the service cheque.

The fact that these relationships with the employer household are individual tends to rule out groupings or exchanges of experience which can be promoted only if there is an outside employer. Turning to the employment system, the new models are overturning the old rules governing mobility and careers (Kristensen, op. cit.), whether this involves careers in enterprise or external mobility: job hierarchies and upward mobility are less clear-cut, length of service is becoming less important than rules based on the assessment of individuals and the skills that they possess, etc. This may lead in practice to major tensions between groups, especially those that are most destabilised (for instance the old supervisors trained on the job in France). If integrated training is to be developed, collective rules in the enterprise and beyond need to be drawn up and to set out the rules of the game from the point of view of job mobility. The question of the certification of this learning (or more precisely of the knowledge acquired) is a key problem to which we will return.

Lastly, the links between integrated training and pay systems are evident and raise a number of questions. For instance, the question of the incentives that these systems must include for employees: in our work with J. Delcourt, we stressed that the involvement demanded, from the point of view of both results and self-maintenance and skill development, is greater. In many of the cases studies, the incentive was essentially negative: the risk of job losses and the fear of unemployment were the 'prime movers'. This kind of incentive obviously has limits when it is wished to develop skill improvement approaches in a 'sustainable' way. What kinds of pay incentive or co-investment formulas are likely to support this development? Recognising individual skill improvements through pay also changes conventional pay systems: less importance is attached to the type of job, there is greater individualism, and employees are assessed from the point of view of their performance in the job and the development of their potential.

The development of integrated training is therefore at the heart of labour, employment and pay relationships, from the point of view of both the enterprise and

"The recent debate in France about the 35-hour working week is a good example: if training is not deemed to be time worked in negotiations to reduce working hours, there will be fewer opportunities for 'integrated learning'."



collective relationships (branch, region). Many European countries have in the past established strong collective rules that have integrated training to different degrees: this is particularly true of countries with large-scale apprenticeship systems and countries that have developed or are starting to develop continuing training obligations levied on enterprises and often linked to enterprise or industry negotiation. The future of 'integrated' learning is very closely linked to the ability to cause these rules to evolve, for instance the ability to develop methods through which work organisation and training, and the evaluation and recognition of people's qualities and their performance, can be jointly discussed in enterprise bargaining.

What forms can integrated training take and how can it be implemented?

A second group of questions relates more specifically to the forms that integrated training can take. It has to be borne in mind here that we still have relatively little scientific knowledge of the mental processes that underpin learning at work or of the optimum combinations of experience and its formalisation and more conventional forms of training. As Sauter (op. cit.) notes in his work, 'a wide range of concepts are used to describe learning integrated into work'. A number of empirical observations stress for instance the role of a mediator (whether a tutor chosen from among peers or a training mentor). Other observations stress the need to find a way of representing work theoretically on the basis of empirical experience. Here again, however, the main 'operating schemes' are unlikely to emerge on their own. They require, for instance, processes of the trial and error type and collective discussions of these processes. Some labour organisations are apparently more suited than others to these processes, but it is still difficult to identify clearly what is likely to pave the way for virtuous circles of learning and how they can be constructed. Meetings between specialists in work organisation and cognitive specialists are still to be organised. A detailed examination of the most propitious situations remains to be carried out in order to draw analytical lessons. A simple ex-

change of good practices is not enough. Nothing in this field is natural. On the one hand, spaces and opportunities for learning need to be constructed, with the awareness that this construction entails costs for enterprises and individuals. On the other hand, we need to be aware that the sharing of this knowledge is an issue within collective and social groups.

The relationships between integrated training and the formal training system

A third group of questions concerns the relationships between integrated learning and formal training and in particular the problems raised by the certification of occupational expertise.

We stressed above that new skill needs and practices were being developed alongside solid basic vocational training acquired through formal methods. More systematic work on the development of vocational training in enterprise and on the diversification of forms of training (including formal continuing training and less formal methods) have shown that the relationship is complementary and that one is not a replacement for the other (Aventur, Möbus, 1999). It has to be borne in mind, however, that this complementary relationship is often badly constructed. This can be seen in current criticisms of the French initial vocational training system relating to its inability to promote collective work experience or to promote project-based learning, with the result that it is the ability of the formal training system to 'learn to learn' that is being called into question. In the opposite direction, criticisms currently being levelled against the British NVQ system relating to its inability to articulate knowledge acquired from work experience and knowledge acquired from more formal systems of knowledge transmission raise questions about the feedback that has to exist between these two methods through which learning can be improved.

This leads us directly to the question of certification. Most European countries have established rules for the certification of knowledge acquired by individuals which act to some extent as signals in the



labour market. In some countries these rules come more from the internal logic of the training system (France, for instance). In others, they have a direct and structural relationship with labour market situations (Germany, for instance). They all guarantee a number of collective reference points for both employers and individuals and thus ensure that individual characteristics can be read by everyone, thereby promoting mobility within and outside the enterprise. Examination of these systems (Möbus, Verdier, 1997) shows that their success depends on their ability to satisfy several criteria at the same time: a criterion of stability that may seem paradoxical in a world where the emphasis is on change, but that is needed if a standard is actually to exist, a criterion of generality through which a sufficiently broad space can be provided for this standard and a criterion of legitimacy that has to be possessed by the authority drawing up the standard and ensuring its implementation. The development of integrated training raises the problem of identifying and certifying the knowledge acquired from this learning in these three areas. If European labour markets are to become more flexible, there needs to be large enough general spaces that go beyond the level of the

enterprise itself even though it is often specifically in the enterprise that this learning is developed. If measurement criteria are to be legible to both individuals and enterprises, they need to be stable, for some time at least. Finally, the legitimacy of the assessing authority is a *sine qua non* for the efficiency of the standard. Most national systems are not at present, for different reasons, very open to the validation of knowledge acquired from work experience. It may even be said that they are a brake on its development. The tendency is then to refer everything back to the enterprise. In this case, however, none of the three criteria is satisfied. The other solution is to create, *ex nihilo*, a new system (see the discussions and controversy surrounding experiments with individual accreditation initiated by the European Commission or the NVQ system). While this may, overall, ensure generality, it does not ensure stability and legitimacy. It is the ability of the actors in each country to establish a system of validation/certification that takes account of the new forms of integrated learning and meets these three criteria that will in all likelihood determine the future of this type of training, and its complementary relationships with more formal systems of training and qualifications.

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The Thin Line

Teamwork - misnomer or innovation in work organisation

Innovations are increasingly focusing on the way work is organised. In one way or another this involves moving away from Tayloristic structures and towards forms of teamwork. How successfully a company can deal with the demands on its flexibility is becoming a question of survival.

Work organisation in transition

For enterprises in developed industrialised nations, market demands and competition conditions have become much tougher over the last ten years. Falling batch sizes, but an ever broader range of variants, falling profits, rising costs, higher quality, and the pressure of meeting ever tighter delivery deadlines make it imperative to come up with innovative production solutions. Companies have to be increasingly flexible and react faster and faster to turbulent environments. They have to satisfy these requirements by means of internal reorganisation rather than by 'educating' the customer. The CIM philosophy of complete automatisisation and conversion to new technology failed in the 1980s - these days nobody speaks of factories entirely devoid of workers - and the potential for flexibility is now seen to lie in human resources. Innovations therefore increasingly focus on the way work is organised. In one way or another this involves moving away from Tayloristic structures and towards different forms of teamwork. How successfully a company can deal with the demands on its flexibility is becoming a question of survival. Sennett¹ was quite right to declare that flexibility is the magic word in global capitalism.

Innovation in itself is not new. What is new about the current changes in work organisation towards concepts involving teamwork, is that they rely on cooperation with and active support from employees for their implementation, in contrast to the passive tolerance of Tayloristic structures. In other words: innovations in work organisation cannot be forced on personnel. Consequently, from the outset, the question is not only which objectives a company wishes to pursue; but

also how the wishes of the personnel can be accommodated in the process. In addition to ensuring competitiveness, there is also the issue of how jobs can be safeguarded and working conditions improved².

The failure of innovative approaches

When reforming the structure of work organisation, enterprises are frequently confronted with problems or difficulties which are considerably greater than those associated with the introduction of new production technology for example. In retrospect, many company-led attempts at innovation fail to live up to expectations. Some fail completely. If we examine why there are such discrepancies in companies' experience of teamwork, we have only to look at the strategies used in its introduction and the typical mistakes made during its implementation. Although not a complete list, the following are the most important problem areas.

□ The introduction of teamwork is a formality only. A number of employees are declared a team, without having first introduced effective changes to the work structures; and without modifying procedures, responsibilities or competencies. This would be a typical example of a misnomer.

□ A given model of teamwork is taken lock, stock and barrel from another company and adopted point for point without adapting it to the specific operational conditions of the second company. Teamwork, however, can not be brought in 'off the peg' because, in different companies, even apparently identical task descriptions conceal the most disparate challenges and problems.

1) Richard Sennett: *The Corrosion of Character. The Personal Consequences of Work in the New Capitalism*. Berlin 1998

2) This decisive point is overlooked by Sennett in his otherwise brilliant essay. Of all places, in his chapter on work ethics, he presents team organisation as a crafty management trick to conceal its own interests and wiggle its way out of responsibility and avoid friction. He takes many pages to suggest that, from the point of view of the employee, authoritarian management structures are preferable, only to reject this impression then without going into further detail. Not even between the lines does Sennett imply that there must be discernible benefit to employees if the management is to achieve its objectives using teamwork.



□ Due to the constant pressure of time, teamwork is introduced 'at breakneck speed'. Under acute production pressure, and without careful advance planning or anticipation of problems associated with the transition, employees are not only expected to cope with the overnight changes in their circumstances, but also to meet all the new demands made on them effortlessly and, if possible, raise productivity at the same time.

□ Those most affected by the introduction of teamwork are either consulted too late in the day, or given insufficient opportunity to make a significant input to the process. Even if the works council is involved in the process, that alone is not enough. It is absolutely absurd to expect initiative, intuition, creativity, responsible action, flexibility, etc. from employees on order. This is a paradox comparable with the imperative: 'Be spontaneous'!

□ The importance of skills acquisition, in the context of teamwork, is seldom disputed. In most cases, however, the term skills is reduced to specialised, technical aspects. The acquisition of social and organisational skills is often regarded as unnecessary ballast and either does not occur, or is limited to the spokesperson of a team. Training courses are not devised with specific target groups in mind. They are frequently postponed and their scale restricted due to time constraints. On the whole it is apparent that skills acquisition is almost exclusively considered to be an additional expense, and seldom an investment with tangible - albeit perhaps not immediate - benefits. Who bothers to calculate the break-even-point of a training course? The argument focuses on concern that employees will become over-qualified. Allied to this issue is the subsequent problem of pay.

□ Pay itself becomes a critical issue, in terms of both the rate of pay and the form in which payment is made. Some pay arrangements may promote teamwork, whilst others may be detrimental to it. Which arrangements will have what effect is very much dependent on the concrete concept of teamwork. Justifiably, employees will accept a discrepancy between desired behaviour and rewarded behaviour for a short time only. Until new pay-performance relationships are de-

finied, full performance potential will remain unclear. This is understandable because otherwise, surreptitiously, new lines of reference could be established. In other words: if I change my level of performance from the beginning, I can assume that this will subsequently become the new criterion for a later premium wage.

□ Basic issues of principle need to be addressed by the unions and employers' associations with issues relating to pay. Wage agreements necessarily tend to be geared towards traditional Tayloristic working structures. The job descriptions in the wage bracket lists not only reflect a high division of labour, rigid and repetitive tasks, but also reinforce them. The skills and behavioural patterns needed for teamwork do not fit into these categories and are not therefore useful for calculating wages.

□ The problem of supervisors is not normally given the attention it demands. If the teams take over planning and management tasks, and are given greater scope for action and decision-making, this has a direct bearing on the team supervisors. Other areas closely involved with production, such as those in operation and process planning, are also affected. Since this interferes with the company hierarchy, it is an extremely sensitive issue. Teamwork can therefore never be considered for one, isolated area of production. The knock-on effects - and if there are none, then it cannot be regarded as proper teamwork - must be considered beforehand and, here too, resolved with a strong emphasis on participation. Should this not occur, it can be assumed that there will be some who try to throw a spanner in the works, or slow down the wheels of change. Nobody should lose out as a result of the innovation.

□ The company's framework conditions must be adapted to comply with teamwork requirements. This may sound trivial, but in reality appears to be one of the hardest problems to overcome. Above all, this refers to the following points: a) the objectives defined for each area of the enterprise must be transferred into a coherent and above all consistent system; b) operational structures and procedures must be geared towards the new objectives; c) team spirit and customer satis-

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- The introduction of teamwork is a formality only. (...)

- A given model of teamwork is taken lock, stock and barrel from another company and adopted point for point (...)

- Teamwork is introduced (...) 'at breakneck speed'. (...)

- Those most affected by the introduction of teamwork are either consulted too late in the day, or given insufficient opportunity to make a significant input to the process. (...)

- The acquisition of social and organisational skills is often regarded as unnecessary ballast, (...)

- Pay itself becomes a critical issue, (...)

- The problem of supervisors is not normally given the attention it demands. (...)

- The company's framework conditions must be adapted to comply with teamwork requirements."



“The essential features at the project’s conception were: careful planning of the implementation process, development of tailor-made solutions, the participation of all affected sections of the workforce, comprehensive planning and implementation of the required training courses.”

3) Subsidisation was granted in accordance with Objective 4: ‘Tackling change through the development of the workforce’. More specific documentation about the project can be found in: Holger Bargmann/Christiane Glatzel: Einführung von Gruppenarbeit in der Automobilzulieferindustrie. [*The introduction of teamwork in the automotive component supply industry*], Koblenz 1997.

4) Every change also triggers insecurity and concerns about what is new and uncertain. The nature and scale of the effect on the individual are not yet clearly recognisable. In such a situation, serious reservations and defensive reactions can be expected. So, when preparing employees for teamwork, it is very important to provide detailed information as a matter of policy. In addition to the usual project presentations, at company and department levels, we held a day-long information session in each of the companies. These were specifically for those branches of the workforce which would be most affected, and took place on a voluntary basis, outside the company environment, on a Saturday. To encourage open and frank discussion, supervisors and management representatives were not allowed to attend. Attendance figures amongst shop-floor employees were close to 100% in each case, and the discussions were extraordinarily lively. These events provided an important basis on which confidence in the external project supervisors could develop.

faction (including internal customers) must be embedded as overriding principles (key words here: corporate culture); d) the company controlling systems must be re-defined (from controlling, to wages and the criteria for in-house promotion).

Starting with these typical problem areas, the Technology Consulting Agency (TBS) at the German Federation of Trade Unions (DGB), Land district Rhineland Palatinate, devised a procedural model for the introduction of teamwork. This was intended to demonstrate that teamwork which caters both for corporate strategies and employee interests can be implemented successfully. For the purpose of an empirical test, a base model with the most difficult starting conditions was deliberately chosen, hence the choice of the automotive component supply industry. The enterprises in this sector are under extreme pressure in terms of adaptability, flexibility, and cost reduction. Employees in these companies are also the first to be hit, and usually hit hardest, by structural change. The aim of the project was to introduce teamwork into two affiliated companies simultaneously, to accompany them through all phases of the introduction, and help in their restructuring. The intention throughout this process was to enhance the inventiveness and competitiveness of the participating companies, and to bring about substantial improvements in the working conditions and employability of their workers.

The essential features at the project’s conception were: careful planning of the implementation process, development of tailor-made solutions, the participation of all affected sections of the workforce, comprehensive planning and implementation of the required training courses.

Training for Teamwork

The project was carried out between October 1995 and May 1997, in conjunction with two firms: *Tectro Kunststofftechnik GmbH* of Saarbürg (plastics technologies), and *Metzeler Gimetall AG* of Höhr-Grenzhausen. Support was provided by subsidies from the European Social Fund and the Land Rhineland-Palatinate, and the participating companies themselves³.

Tectro manufactures a range of about 3500 technical plastic parts, using injection moulding. These are for use in various sectors (‘white industry’, mechanical engineering, medical technology, automotive industries). At the start of the project, the company had 226 employees, of whom 196 were involved in the trade section. These employees were predominantly semi-skilled workers with a low average age. The male to female ratio was about 60:40 and the proportion of foreign workers was minimal.

Metzeler Gimetall AG belonged to the British concern *British Tyre and Rubber (BTR)* and, at the launch of the project, had four sites in Germany. Metzeler Gimetall AG was purely a supplier of automotive components, whose main business was the manufacture of anti-vibration systems. The site in Höhr-Grenzhausen produced conventional (motor) bearings, hydraulic bearings and hydraulic bushes. 80% of the parts manufactured there were supplied to two customers. At the start of the project the company employed 399 people, of whom 264 worked in the trade section. The proportion of female employees was considerably lower than at Tectro, whereas the proportion of foreign workers was considerably higher.

The first phase of the project, the planning phase, was characterised by providing the personnel with detailed information⁴, developing a participation and project infrastructure, refining specific project objectives, choosing the sections which should pilot the scheme, and developing teamwork models tailored to each company.

Refining the project objectives to be achieved through teamwork is one of the first and most crucial steps in the process of every innovation in work organisation. As banal as this sounds, it is seldom given sufficient thought and seldom undertaken. These objectives must be established with the consensus of all the parties involved - the management, works council, employees, and specialist departments - but must also be formulated at the ‘right’ aggregation level. The two things are very closely related. The more abstract the formulation of an objective, the easier it is to reach a consensus or, to put it another



way: it is the details which cause the biggest problems. By the same token, the more general an objective is worded, the less instructive it is⁵. In the case of popular phrases used to describe objectives, such as 'improving the competitiveness of the company' and 'contributing towards the humanisation of the work', there is likely to be general agreement. Absolute priorities such as these must be broken down and made operational in a series of steps. With regard to 'cost cutting', it is important to specify exactly which costs are meant and by what means the cuts will be effected. (The likelihood of a conflict developing is much greater in the case of cuts in staffing costs than costs for keeping parts in stock). It is also important to clarify who is to be responsible for the particular financial cutbacks to affect the desired targets. If teamwork is to have no impact on these objectives, then it is doomed to failure right from the start. Objectives are also subject to constraints with regard to their content. They must comply with at least two criteria: they must target the company's most serious problems, ('What do we need to do to ensure that we are still on the market five years from now?'; 'What is the one thing that we offer that our competitors do not?') and they need to lead to tangible improvements in conditions for the employees. Although it cannot be achieved *en passant*, the result of discussing company objectives in such a way is to establish a starting point and a yardstick for a series of subsequent decisions.

How to shape the teamwork concept itself is one of the foremost of these subsequent decisions. The concept consists of several individual components. The first step is to decide which organisational principle the teamwork should be based on (should it be orientated towards customers, products, or processes...); which criteria should be used to determine how the teams are formed; what should be their future tasks, responsibilities, rights and obligations; and in which practical and chronological sequence should this transition take place. The answers to these questions will provide a clearer picture of skills needed plus training plans⁶.

The project took an extended definition of qualifications into account which

□ is based on systematic understanding rather than mechanical learning of sequences of actions, without awareness of their rationale, context, difficulties and consequences;

□ includes social, communicative and organisational dimensions as integral components in addition to catering for the skills which have a direct, specialised, technical relevance. Often, the former are regarded as pointless and expensive ballast⁷;

□ is not regarded as a derivation of technical or organisational changes, but rather as a productive resource for coping with the demands of a changing market.

The training concept provided for the following elements: juxtaposition of collective and individual training programmes; comprehensive specialised, technical, social communicative and organisational training; the development and implementation of training for various target groups (team members, team spokespersons, works councils); implementation of company-specific training programmes of a specialised, technical nature in-house, using in-house staff, and external, training programmes for specific target groups, orientated towards social and organisational skills, in the form of joint seminars for both companies run by the Technology Consulting Agency (TBS); involvement of employees in assessing where there is a need for training, and in the transfer of skills (with reference to their personal training interests, and their own activities as trainers for co-workers).

Despite the limited number of members in each group (at Tectro there were 24 people divided into three groups, at Metzeler there were 32 in two groups), the training input needed was considerable. Specific training plans were drawn up in the individual groups. The plans were to strike a balance between personal preferences and the interests of the company. A matrix was used to help accomplish this. On one of its axes, all the jobs which arose from group discussion (in particular, those new duties which had been added) were noted. The members of the team were listed on the other axis. The first step was to sort out which of the jobs could be categorised as covered

5) The fate of many corporate philosophies is based on this fact. Noble principles, which meet with spontaneous and unconditional approval from all who read them, amount to nothing in the hard world of business. They become part of the wall decorations in the foyer next to the quality certificates, but are not even as binding as these.

6) There is insufficient space here to go into further detail about specific points. It is logical, however, that the more concrete the objectives and corporate framework conditions, the more varied the individual solutions can and must become. Therefore, by way of an organising principle, Tectro opted for a customer bias ('Bosch Island'), whereas Metzeler chose a product bias ('hydraulic bearings') since they delivered an identical product to different customers. At Tectro, this led to a complete reorganisation of the way staff were grouped together (through in-company notices), whilst at Metzeler the existing departmental structures were used. These decisions in turn have an impact on social processes within the teams, the range of new tasks, the capping of responsibilities previously held by supervisors, and the agreements governing interplay with internal service areas, etc.

7) We were not interested in a general reference to key qualifications, embellishment, or an attempt to stimulate demand to meet an existing supply. The training in social skills was targeted directly at an understanding of the social processes at work within teams and enhancing the participants' ability to fit into a team environment; with a view to working with and in teams charged with achieving particular objectives. This has little to do with a romantic social touch. For example: as cohesion within the teams increases (which is desirable), it is met with corresponding isolation from, and competition with other teams and other departments (which is undesirable). This has dysfunctional consequences for the cross-group process orientation. The measures for organisational training were geared towards supporting new planning tasks (production control, resources planning, the team coordinating its own activities), which are generally recognised as playing a significant role in overcoming or phasing out Taylorism. Accordingly, it is less about techniques of writing cards, and more about project management.



8) A training matrix of this nature can easily cause sparks to fly. It contains personal and comparative data which e.g. could be used to compare wage group descriptions or to check pay levels. This could well be the case where the internal wage structures come under strong fire (a more or less ubiquitous phenomenon). Care should therefore be taken when deciding which documents should be made available to whom and in what form. Within each team, however, these differences and disparities will show up anyway. Assessing one's own position within the team, in terms of mastery of skills, has to be justified. In doubt, evidence must be produced (since one could be assigned to tasks correspondingly). On the other hand, if one claims to have mastered a particular skill, then one can obviously not express an interest in receiving training for this particular skill.

9) These people were occasionally unclear about their roles because in their capacity as head of department for production scheduling, for example, they had regular contact with the teams and subsequently felt under pressure to prove themselves.

10) It is only possible to provide a cursory description of individual aspects here. The full assessment of the project by the various people who took part can be found in Bargmann/Glatzel, loc. cit. pp. 162-184. The account is based on standardised interviews with team members and spokespersons, non-standardised interviews with the works councils, written surveys carried out with supervisors and management, along with figures and data provided by the companies.

by existing skills and, by way of a second step, particular training interests were noted. In a table such as this it becomes immediately apparent where there are bottlenecks, not only in terms of skills shortages, but also where there is an excessive concentration of skills⁸. Each group then managed to strike a balance between personal interests and the company's requirements, in a clear procedure which was regarded by everyone as fair and just. All parties committed themselves to the resulting training plans. These covered the following points: a list of all those people who were to receive training, what the training would cover, the desired trainers, and a binding deadline (which was coordinated with the anticipated production requirements). Regular checks were made to ensure that training plans were adhered to and implemented.

A number of further collective measures were introduced alongside these specific training programmes. Metzeler was particularly active in this respect. The collective measures were on more general topics of importance to each and every member of the teams. To this end, various in-house 'consultants'⁹ were called in, and specially prepared for the task. The topics included: tidiness and cleanliness in the workplace (which, aside from the connotations of being secondary virtues, have a definite bearing on logistics and safety at work), preparing a weekly schedule, material flow, quality, the reduction of the charge off rate/factory overheads, planning the assignment of personnel, machine running time and maintenance schedules, the control of assembly parts, the use of supplies and expendables, etc.

The seminars relating to the acquisition of social and organisational skills, run by the TBS, took place outside the companies in the form of two-day seminar blocks. Each seminar group consisted of an equal number of participants from both Metzeler and Tectro. Due to the number of participants, each seminar block had to be repeated a total of four times. The idea of bringing the two companies together in one group, outside the normal work environment, proved to be extraordinarily successful. Not only was it possible to coordinate the seminars better in terms of organisation, taking production pressures into account, it also provided

the participants with a variety of learning experiences. It enabled them to see beyond the corporate blinkers, to recognise the similarities and the differences in the companies, and to acquire proven solutions to problems from other areas. These factors and the diverse social contacts proved very beneficial, a fact which those who took part have continually emphasised. In the space of one calendar year, the TBS held 43 days of seminars, with 539 participant days.

The fact that the individual training measures were not stand-alone entities, but highly inter-related, proved to be extremely fruitful, as did the fact that they were orientated towards specific corporate conditions as well as the common objectives of the teamwork. In addition, the permanent on-site supervision and support provided by the TBS, was one of the crucial factors in the success of the project. It helped to ensure the continuity and implementation of what was learnt.

The project was regarded as a success within both companies and by all the groups of people who took part, although the different perspectives highlighted different areas of particular benefit¹⁰. For team members, work has generally become more interesting and varied. They emphasise that the work has become more enjoyable, but add that, at the same time, more demands are placed on them. Everybody appreciates the greater scope for taking action and the higher degree of personal responsibility have been important steps, and no-one would like to return to the earlier situation. Assessment of the training programmes is very positive. The TBS seminars in particular received the rating 'good' or 'very good' throughout. These ratings applied just as much to the topics, consultants, and methods, as to the opportunity to get to know workers from the other company. More than two-thirds of those surveyed went so far as to say that they had 'a lot of fun in the course of the training programme' and - in spite of the intensity of the training - they wished they could have received even more. Reciprocal on-the-job training was also praised very highly, in contrast to the training provided by in-house trainers. The lack of time and a systematic



training programme (neither company had a full-time trainer on board) were criticised.

The project was also pronounced a success from the business point of view. After a close look at the figures and an attempt to assess the cost-benefit ratio, the plant manager from Metzeler drew the following conclusion: 'If we were to say today that we've only been able to exploit 50% of the teams' potential so far, and we are likely to benefit more, then this model has paid for itself in a very short time. In summary we can say that teamwork has had a positive impact in every possible way on the entire section and neighbouring departments'¹¹. Teamwork proved to have a particularly strong impact on improving quality and on reducing production overheads and absenteeism. At Tectro, the immediate economic effects did not receive quite the same degree of praise from the management. In their case the 'secondary factors' were considered particularly beneficial. They found that qualifications in specialist areas had improved and the degree of flexibility and self-sufficiency of the staff had grown. The ability to plan working procedures had improved noticeably, and there was a greater readiness to accept responsibility. Conflicts could also be settled more easily, which everybody who took part in the survey regarded as 'very important'. Tectro also emphasised that employee motivation and quality awareness had grown enormously, as had identification with the company. In spite of the considerable time and effort which went into the training, all those questioned emphasised that the overall amount of time available for training was inadequate, and that too few seminars were held. It was striking that works council assessments tallied almost completely with those of the corresponding management.

During the final phase of the project, the Head Office of Metzeler Gimetall AG announced that it had decided to shut down operations at the Höhr-Grenzhausen site, not because the plant was making losses or bringing in insufficient revenues (in comparison with the other plants, Höhr-Grenzhausen was actually scoring well in these respects). The explanation was that the company needed to centralise its operations to reduce overheads. Understand-

ably this undermined motivation amongst the team members (which had considerable knock-on effects for the company: machine down-time rose, as did absenteeism, quality deteriorated, etc.). It made a mockery of the project aim of safeguarding jobs. The project, however, could do nothing to alter the decision. On the other hand, the project was sponsored in accordance with Objective 4 of the European Social Fund: 'Tackling change through the development of the workforce'. The possibility of job losses had become a very definite threat. For the team members from Metzeler the question was whether their experience with teamwork and the training programme for it would benefit them on the labour market?

Two years later

Following the introduction of teamwork and the dynamics it triggers, enterprises, processes and the people involved change. That is basically intended, of course, but it is never possible to predict accurately what changes will occur, and to what extent. The breakdown and distribution of desirable and undesirable, anticipated and unanticipated effects is, by the same token, also impossible to forecast.

In order to learn more about these factors, we carried out a follow-up study from September 1998 to February 1999. This study was also subsidised by the European Social Fund and the Rhineland-Palatinate Ministry of Labour in accordance with Objective 4. The questions were formulated differently for each company. In Tectro's case, we were particularly interested in finding out whether they had continued to use teamwork. If so, we wanted to establish the extent to which labour policies had been withdrawn or expanded, and to receive feedback from those involved on their feelings about teamwork, approximately two years after the pilot project had ended. In the case of Metzeler, labour market policy issues were of greater importance.

We discovered that Tectro had not only continued to use teamwork in the sections which had piloted the scheme, but

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11) A memo from the plant manager at Metzeler Gimetall AG dated 12.03.1997; quoted according to Bargmann/Glatzel, loc. cit. pp. 166.



“The management is convinced there can be no turning back from the present status, and that working well in a team is a trait high on their priority list when recruiting new staff. The managing director puts it this way: ‘Traditional sloggers are of no use to us, aside from which, they would immediately beam themselves away from here.’”

“The workers are showing a new degree of willingness to take on new tasks and new responsibilities of a type and scope which their contracts would not compel them to do. Correspondingly, the withdrawal attitude displayed by many in traditional, Tayloristic working structures (...) is being dropped voluntarily, but only if a corresponding willingness to change is evident on the manager’s part: taking workers seriously and acknowledging good work, and providing a plausible reason for any orders and demands, etc.”

12) On the contrary, achieving progress through teamwork has, over time, become regarded as a matter of course. Consequently, there has been an implicit shift in the standards expected, more precisely: expectations have risen, as the managing director pointed out.

13) This happens quite often without intent due to everyday time constraints and falling back into old habits: everyone does what they can do best (i.e. fastest), and thus takes the first and decisive step towards a relapse into the old, highly specialised, division-of-labour system, which then - almost surreptitiously - leads to the next steps.

had developed it to such an extent that the entire company had been subdivided into smaller teams or ‘islands’, retaining the procedural model from the original project. According to statements made by the management, the company’s business figures have been positively influenced, turnover and productivity have risen and quality has also improved. They particularly emphasised the enormous growth in flexibility, not only in material terms (through the training programmes), but also in temporal terms (motivation, enthusiasm, and identification with the company). It is hard to attribute these results to a single factor, since various measures were introduced at the same time. Teamwork, however, would certainly have made a considerable contribution to the overall improvement in the situation. The positive trend at Tectro has also led to new jobs, especially in the area of the *Bosch* Island, and workers on temporary contracts have become part of the permanent workforce. These indicators certainly imply an increase in job security.

The management is convinced there can be no turning back from the present status¹², and that working well in a team is a trait high on their priority list when recruiting new staff. The managing director puts it this way: ‘Traditional sloggers are of no use to us, aside from which, they would immediately beam themselves away from here.’

The phenomenon of teamwork projects stagnating or reverting to the *status quo ante*¹³, at the end of the public subsidisation period and/or supervision by external groups, could not be substantiated at Tectro.

From the perspective of employee interests, development in working conditions was the most important issue. The following statements on changes in working conditions are based exclusively on subjective assessments by members of the teams and the spokespersons for the teams. They refer in particular to those subdivisions in which, for the purposes of teamwork, specific changes were made, i.e. changes to the types of tasks, the horizontal and vertical integration of tasks, task rotation, assuming new responsibilities in the sense of greater scope for ac-

tion and decision-making, and flexible assignments, etc. In all the subdivisions mentioned the concept of teamwork itself stabilised and developed. Both team members and their spokespersons agree that the number of tasks has increased, employees have assumed new responsibilities, and systematic rotation has been preserved and expanded. Assessment of this is also conclusively and consistently positive. Nobody is prepared to return to the way things were. These changes in working conditions and the way work is experienced have also clearly altered the attitudes and personalities of the workers. The most apparent and most commonly witnessed change in character is a dramatic growth in self-confidence among the team members. This is something they see themselves and which has also been confirmed by supervisors and works council, and which applies to both Metzeler and Tectro. The first changes became apparent at a very early stage of the project, and they were dramatic. The vivid way in which these changes are described, especially by the management and works council at Metzeler, reveal the extent of the changes. According to the former plant manager: ‘A jolt went through the team’; whilst the works council spoke of a ‘wind of change’. As a result, there was an increase in accountability. The need to justify decisions became a maelstrom bringing about a change in dealings between supervisors and workers, in a form which can scarcely be reversed. Management behaviour based on instruction and control is no longer sustainable and would only lead to criticism and opposition. The workers are showing a new degree of willingness to take on new tasks and new responsibilities of a type and scope which their contracts would not compel them to do. Correspondingly, the withdrawal attitude displayed by many in traditional, Tayloristic working structures (‘I’m not paid to do that’; ‘it’s not my responsibility’; ‘it’s got nothing to do with me’, etc.) is being dropped voluntarily, but only if a corresponding willingness to change is evident on the manager’s part: taking workers seriously and acknowledging good work, and providing a plausible reason for any orders and demands, etc.

The priority for the employees of Metzeler (the majority of whom have no formally



recognised vocational qualification) was to find a new job in a regional job market which, being a predominantly rural area, is under strain. All those involved in the project received an 'internal certificate' confirming their participation in the training programme with an additional sheet describing the content of the course in greater detail. In addition, participation in the project was documented in their official references.

According to Metzeler's personnel manager, the participants had a definite bonus on the labour market. They had become more aware and self-confident, and presented themselves in a better light; even their job applications differed enormously from those normally received from unskilled workers. Most of the workers had found good jobs fast: the exceptions were those with language difficulties and older workers¹⁴. Companies made their decisions largely on the basis of fewer absences, and greater commitment and reliability. Teamwork itself does not play an explicit part in this; it is more its connotations. There were also enquiries from companies in the neighbouring regions, the tenor of which were: 'Have you got a few more of them?' The new firms, some of which took on several of Metzeler's former employees, could be congratulated on recruiting such well-trained team workers who would show such personal responsibility and such commitment to the job.

Although the competent labour office clerks were of course unable to reveal details about individual cases for data protection reasons, they summarised as follows:

'Some of those affected were proactive, taking the initiative right from the start, and a few had something in the pipeline almost immediately. Several were welcomed by other companies 'with open arms'; the good people were snapped up straight away. Others are still on the files today. The ones who are left are mostly Turkish women with language difficulties ('they can just about manage to write their own names'), mobility problems, or the older ones. The others had hardly any problems at all. As soon as it became known that Metzeler would be closing down, firms began to ring in. The grape-

vine functions very well here; people know each other.'

Only eight team members had been unable to find new work at the time of the survey. Five of these were still employed by Metzeler, and therefore not unemployed. The majority of those questioned were job-hunting for less than one month: a few required 2-3 months. Most of them found jobs through personal connections, either through friends and acquaintances, or through the supervisors or the works council at Metzeler. The number of applications for jobs advertised or arranged by the employment office was negligible. From the perspective of those affected, participating in the project and the training course played only a very subordinate role in their success at finding a new job.

In summary, we can say that the project was very successful, in terms of both corporate and employee objectives, and that the positive effects have been stabilised. Given the chance, all the interviewees in both companies would take part in the project again. In the eyes of Tectro's manager, teamwork is 'a dynamic process which can no longer be halted; these are things which cannot be reversed'. The production manager adds: 'There is no alternative for the future,' while the spokesperson for the Tectro's works council summarises his experience in a single sentence: 'Teamwork helps to make the work much more people-friendly.'

Learning to be innovative

The new (and economic) imperative could be: Learn to be innovative! This is not the same as 'learn to organise' however. Geissler was quite right to point out that an organisation cannot learn, but only the people who work within the organisation. They also have to want to learn, i.e. they not only have to see the point in it, but also have to see a personal benefit. Primarily, this involves the preservation and safeguarding of jobs, as well as (in whatever form this may come) substantial improvement in working conditions. This is where the demand that staff be involved in innovation processes derives from.

"In summary, we can say that the project was very successful, in terms of both corporate and employee objectives, and that the positive effects have been stabilised."

"The new - and economic - imperative could be: Learn to be innovative!"

¹⁴ In a discussion with experts from the responsible regional labour office, the 'age barrier' is put at approximately 45 years.



Innovations in work organisation such as the introduction and implementation of teamwork, cannot happen all at once. They are part of a sensitive process subject to disruption, and need a guiding hand until they can stand on their own two feet. The following points have proved useful in this context:

□ Teamwork needs a mentor

Great demands are made of the person in this function. Whoever takes on the task, either from within or outside the company, must have no history of involvement in company disputes or conflicts, and must be considered trustworthy and honest by the various cooperation partners. There should be no overlapping of the mentor's personal interests and the issues to do with the teamwork. The mentor, as the person in the line of responsibility, should not get mixed up in ambiguous roles.

□ The 'keep everything together' principle

Conceptual development and implementation, on-site training and supervision should not be subject to division of labour but kept in one hand as far as possible. The advantages of this principle are obvious even if, for practical reasons, exceptions must be made. Systematic deviation from this principle is not only impractical but can also be damaging, as the following example shows. A business consultant assisted in the development of a concept for teamwork for a medium-sized com-

pany. He was also commissioned to provide training in social skills for the members and spokesperson of a particular team on a given number of days. The consultant subcontracted these seminars. Pre-prepared seminar modules were then run, making no allowances for the specific structures of the company. While the teaching methods may have been adequate for a target group from the original section, they were not suitable for semi-skilled industrial workers. These seminars not only failed to achieve their objective, they subsequently led to strong resistance on the part of the participants whenever anything even remotely connected with the words 'seminar' or 'training' arose.

□ Training the trainers

The circle of trainers expands considerably during teamwork and involves not only full-time initial and continuing training specialists (who in any case are not to be found in many small and medium-sized enterprises), but also a wider circle of personnel who have achieved expert status in subjects which might be relevant in connection with innovations in work organisation. This training must not be restricted purely to didactic and methodological questions. Teamwork always includes topics and content beyond the personal vocational experience of those exclusively employed in training (e.g. methods of decision making within a team). It is therefore of utmost importance to re-define the relationship between continuing training and organisational change.



EC and EU education and vocational training programmes from 1974 to 1999: an attempt at a critical and historical review



Burkart Sellin
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Political and legal framework conditions for EU education and vocational training programmes

If we wish to discuss and assess the numerous EU programmes, past and present, we should call to mind the political and legal framework conditions and the changes they have undergone in the course of time.

The chronology of these programmes does not begin until nearly 20 years after the establishment of the EEC in 1957. In the mid-1970s the EC, consisting of 9 Members at that time, launched the first youth, education and vocational training programmes. At the time, education policies were high on the list of political priorities in the Member States. This was no longer so in the following years, although they do appear to have regained importance recently, as demonstrated by election campaign topics and action programmes in the United States in 1996, the United Kingdom in 1997, and also in France and the Federal Republic of Germany since 1998.

Ministers of Education met for the first time at EC level in 1974, although there was no legal basis for the meeting in the Treaty of Rome (treaty establishing the EEC). Thus the meeting was held **at the Council** of Education Ministers, not **as**

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The author takes sole responsibility for all statements and evaluations expressed in the article, and points out that these opinions are not necessarily shared by CEDEFOP as a whole. However, the article is also intended to support the current efforts of CEDEFOP and its Management Board – comprising delegates from all Member States (government representatives and spokesmen for the social partners' organisations) and the European Commission – to achieve as broad a consensus as possible in view of the challenges facing the development of vocational training in Europe and the debate on medium-term priorities for CEDEFOP and their practical implementation in the course of the next few years. The article might also be of help in defining the role that CEDEFOP could assume as specialists and research consultants monitoring EU programmes in the field of vocational training, since one of the tasks of the Centre is to support the EU and its Member States in implementing these programmes. We would greatly appreciate any comments and suggestions, as well as corrections.

the Council of Education Ministers. Article 128, which no longer exists, did, however, provide the EC from the beginning with a relatively clear legal basis for dealing with vocational training. It was expanded in 1963 to include the general principles for a common vocational training policy. Until the mid-1980s the Ministers of Labour and Social Affairs bore sole responsibility for vocational training.



“The 1974 agreement on cooperation in education initially covered four topics:

- Cooperation among universities with particular reference to student exchanges

- Equal opportunities for girls in secondary education

- The education of second-generation immigrant children

- The transition of young people from school to adult and working life”

They are still mainly responsible, but the Ministers of Education are now consulted more often.

The 1974 agreement on cooperation in education initially covered four topics:

□ Cooperation among universities with particular reference to student exchanges

□ Equal opportunities for girls in secondary education

□ The education of second-generation immigrant children

□ The transition of young people from school to adult and working life

Later, “the European dimension” in the classroom and cooperation between higher education business and industry were added to the list.

In order to stimulate the exchange of information between the education ministries and school authorities, *Eurydice* (see below) was set up as an information network and a centralised, EU-wide education information service. It still exists today and is financed by the European Commission.

These four topics dominated the activities of the EC in the area of education until the mid-1980s, when further topics were taken up: new technologies; the promotion of occupational and management training in small and medium-sized enterprises and new local employment initiatives; continuing training and alternating training.

At the time there were no special programmes for vocational training with the exception of European Social Fund intervention with activities related to further training and retraining in disadvantaged regions of the EC (southern Italy, Ireland, Northern Ireland, Scotland and Wales, etc.). These projects were aimed at certain target groups at a disadvantage in the labour market, but have had hardly any effect on the development of the system itself. Vocational training, especially the training of (young) adults as a means of combating increasing unemployment, tied up about 80% of Fund resources. The EC contributed, sometimes substantially, to

the consolidation and expansion of the vocational training infrastructure in these regions. Later, complementary financing from the Regional Fund, the Mediterranean Programme and the Cohesion Fund added their contributions. Recently these measures have contributed considerably more and pro-actively to the systemic development of disadvantaged regions and Member States. Since Social and Regional Fund intervention is usually based on economic, regional or labour-market policies, it is not the focus of our observations here.

In 1975 the European Centre for the Development of Vocational Training (CEDEFOP) was founded as a consequence of the EC sociopolitical Action Programme approved by the heads of state and government in the Hague in 1974. It commenced work the following year in (West) Berlin. The information, documentation and research centre, which has been based in Thessaloniki, Greece, since 1995, provides specialised support and guidance to the EC, now the EU, on its way to a common vocational training policy. The centre was and therefore is a permanent EU institution, and not a temporary programme. CEDEFOP works hand in hand with the above-mentioned *Eurydice* information service for cooperation in education – with the Centre focusing on vocational training. The Centre has had only little influence on the preparation and implementation of EC programmes in the area of vocational training¹, although its preliminary investigations, studies and system comparisons have been an invaluable aid for debates among policy-makers at the planning stage and for project organisers in implementing programmes. In 1994 the European Training Foundation in Turin commenced work. The Foundation supports the EU in its promotion of cooperation with central and eastern Europe with regard to vocational education and training and in implementing the relevant programmes (Tempus, Tacis and Phare)².

The sole programme before 1974 which really centred on vocational training was an exchange programme for young workers, which was formally prescribed by the Treaty of Rome. This programme was later integrated into PETRA and its successor programme, “Youth for Europe”.

1) With one exception: the study visits programme for vocational training experts was and still is coordinated by CEDEFOP. It was an integral part of the PETRA programme and is now part of the Leonardo da Vinci programme. CEDEFOP cooperates to a certain degree with the latter with regard to studies and analyses, especially in the area of qualifications research.

2) The appendix gives a summary of the various programmes and their objectives.



The first education programme of all was launched in 1975. It dealt with the transition of young people from school to working life. It ran for three years and was extended for a further three, then became part of its successor, PETRA, which was launched in 1985 (Sellin B., 1994). It focused on the political objective of combating rapidly rising unemployment among young people after the oil crisis and in the mid- and late 1970s. In view of the above-mentioned general principle, that no young person should be forced to enter working life without recognised vocational training, this objective was emphasised and often reiterated.

PETRA was approved by the Council of Ministers of Education and Labour at its first meeting, but with a qualified majority, and not unanimously as had been usual until then. The Federal Republic of Germany, in particular, appealed to the European Court of Justice on this issue, but the case was dismissed with the comment that the EC general principles on vocational education and training of 1963 formed part of the treaties and the vocational training policy of the EC was one of its four basic freedoms: the freedom of movement for goods, capital, services and persons, which were guaranteed by a regulation on the permissibility of qualified majority decisions in the Single European Act.

PETRA was joined in the mid-1980s by programmes for student exchange and cooperation in higher education (Erasmus), the promotion of cooperation between higher education and business and industry (Comett), the promotion of in-company continuing training (FORCE), the promotion of qualifications in response to new technologies (Eurotecnet), the promotion of equal opportunities for women in vocational education and training (IRIS) and of language training (LINGUA). Thus a whole spectrum of programmes developed which gradually covered the entire field of education and vocational training with the exception of compulsory schooling. Some of them overlapped or were even superfluous because concurrent initiatives existed within the framework of EC Social and Regional Funds (Piehl, Sellin, 1993).

The programmes generally had very ambitious aims: they did not, however, al-

ways achieve them. The volume of funds available to them, which was very modest considering that the EC had grown to 12 Member States in the meantime, bore no relationship to their far-reaching political goals.

The student exchange programme ERASMUS, which was launched at the end of the 1980s, stood out among the other programmes named in respect of numbers of participants and amount of funds available to it. It was also the most successful, even though it did not achieve its objective of about 10% of all students studying in another European country. In the 1990s this programme was extended to include students from central and eastern Europe, within the framework of the Tempus programme.

Common to all these programmes was their provision, to varying extents, for

- the exchange of skilled workers and participants
- the promotion of joint pilot projects, and
- the implementation of comparative studies among the countries involved.

Exchange of some type or another was the focus of all the programmes, which is why they were often called EC exchange or mobility programmes as a way of describing the entire range of education and vocational training programmes.

The programmes launched in 1995 as a consequence of the ratification of the Treaty on European Union of 1994

- Socrates, based on Article 126, for education
- and *Leonardo da Vinci*, based on Article 127, for vocational training

finally replaced the education and vocational training programmes listed above. The new programmes concentrated on the main objectives of the former and preserved most of their priorities. "Youth for Europe" was created in the late 1980s for young people (cf. Council Decision of 26 June 1991 in the Official Journal [EEC] 91/C 208). It was continued as a separate

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- The exchange of skilled workers and participants

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"The programmes launched in 1995 as a consequence of the ratification of the Treaty on European Union of 1994, Socrates, based on Article 126, for education and Leonardo da Vinci, based on Article 127, for vocational training finally replaced the education and vocational training programmes listed above. The new programmes concentrated on the main objectives of the former and preserved most of their priorities."



programme and carried on the youth information and youth exchange programmes formerly covered by PETRA.

Concurrent to the reform of the Structural Funds (Social, Regional and Agricultural Funds), Community Initiatives (special transnational support programmes for specific disadvantaged target groups, sectors and regions) were launched. To a certain extent they overlap with the focal goals of the Leonardo da Vinci programme, although their objectives are geared more towards employment in specific target groups, regions or sectors.

Aspirations and reality of the first-generation programmes

Two generations of programmes can be distinguished in the political and legal developments sketched briefly here.

The first generation was born of the pre-Maastricht legal situation and Article 128 in particular, which dealt with vocational training, and by the activities of the education ministers starting in 1974. The second generation is based on the post-Maastricht legal situation.

Although we intend to concentrate in this article on assessing the second generation, it is imperative to evaluate the first generation, too, for a true understanding of the former, especially since both the Leonardo da Vinci and Socrates programmes really only took off in 1996, so that current experience with them allows only preliminary conclusions.

Programmes such as PETRA and Force, which target the heart of vocational training, have certainly achieved their objective of promoting the exchange of information and experience and improving the level of knowledge and problem-solving approaches among the participants, the institutions and institutes involved. However, the expected and anticipated multiplier effects have been far more modest. In most Member States they had little direct impact on the standard systems of education and training or brought up little sustained innovation or reforms.

There are various possible reasons for this:

- The results were not disseminated adequately by the EU and the Member States.
- Practitioners and others involved had little or no scientific support in implementing them.
- Rigid persistence of the standard systems and resistance in the Member States to externally proposed reforms and innovations.
- Particular interests of project practitioners and others involved in the projects.
- No external evaluation of the programmes and projects.
- Bureaucratic obstacles at national or EU level or hurdles hampering cooperation at the various levels of responsibility within the relevant Member States, in particular in respect of selection and approval of projects and their funding.
- Lack of involvement of policy-makers and practitioners, the "end users" of pilot project and study results.

From the outset, PETRA aroused expectations which could never be fulfilled. The programme was to solve the problem of too few school and/or enterprise training places corresponding to the talents and inclinations of young people on the one hand and providing high-quality vocational training leading to a recognised occupation on the other. This target was an illusion from the start, due to lack of political interest on the part of most Member State governments and especially due to the state of public budgets. It was an explicit goal promulgated in the early 1960s, first by the EEC, then the EC and now the EU. However, in recent times it has no longer been unambiguously propagated, especially as since Maastricht the 1963 general principles are no longer legally binding.

Apart from this, the funding of the programme and its projects was much too modest to bring about any real change. Matters were different with the Structural Fund intervention. The problem here was to obtain the complementary funds from national and/or regional or local public



budgets, which might have been anything up to 50% of the financing.

The first generation of education and vocational training programmes did not depend on the availability of complementary funding. However, the system was introduced for the second generation (Leonardo and Socrates) and here, too, it has become a considerable problem which has deterred many projects from the start.

The duration of the programmes – three to four years – has also been too short to bring about structural reform. This was particularly true of the Force programme, which, unlike PETRA, had no forerunner to precede the transitional programmes. The success of many projects in the Force and PETRA programmes, and in IRIS and the Community Initiatives linked to the European Social Fund, which also consisted mainly of pilot projects, comparative studies and exchange of information, was again called into question when no follow-up financing was available after the initial period of funding, e.g. through direct funding by agencies in the individual states.

The lack of continuity in EC and EU project financing over several years and the lack of dependable follow-up financing – however successful the project might have been – confronted practitioners with a severe challenge. University research can survive on this basis, but vocational training consultants and practitioners will hardly be willing to give up normal working conditions just to implement on a full-time basis EU projects for which no reliable follow-up funding is foreseen. Most can therefore only conduct such projects on a part-time basis, which means that the projects, and especially their coordination, rest on shaky foundations.

The results of those first-generation programmes which targeted the heart of vocational training had hardly any direct impact on the standard systems. Even where they did, the effect was short-lived. Not only were these projects not developed further, their results were not even preserved for the following generation of project-makers. New applicants often had to re-invent the wheel time and again, i.e. learn international project management,

establish transnational contacts, overcome initial financial problems, collect basic information, etc.

Integration of the programmes into the common (vocational) education policies of the EU

The programmes must be integrated into overall EC, now EU, policies in the fields of education and vocational training. They can only be as good as European Integration policies in these fields.

Therefore any assessment must undertake the difficult task of evaluating these policies as a whole.

In brief, against the background of experience gained with first-generation programmes of the pre-Maastricht era, we can summarise as follows: higher education programmes, especially ERASMUS and Comett, were more successful as a rule than general education and vocational training programmes. This fact must be put in relation to the funding they enjoyed, which was much more generous for the former than the latter. Another crucial factor might well be that higher education institutions are far less impeded by government bureaucracy and restrictions by trade and industry than vocational schools and training centres. Lack of autonomy hampers both innovation and transnational cooperation considerably. The programmes were also usually more successful in the areas of continuing and further training and re-training, whether in-company or external, because these offer more scope for innovation and the systems are still in the process of establishing themselves. In this field, problems relate to the common “might as well do it” effect with in-company training and the frequent unsatisfactory adherence to quality standards in external continuing training.

If we view the influence of the EU on this area of policy as a whole, including the programmes another viewpoint altogether becomes apparent. The impact in many Member States has been great and should not be underestimated. The Irish Republic, for instance, consciously up-

“The programmes must be integrated into overall EC, now EU, policies in the fields of education and vocational training. They can only be as good as European Integration policies in these fields”

“Higher education programmes, especially ERASMUS and Comett, were more successful as a rule than general education and vocational training programmes.(...) Another crucial factor might well be that higher education institutions are far less impeded by government bureaucracy and restrictions by trade and industry than vocational schools and training centres.(...). The programmes were also usually more successful in the areas of continuing and further training and re-training,(...) because these offer more scope for innovation and the systems are still in the process of establishing themselves.”



“In the meantime, the new, second-generation EU programmes (Socrates, Leonardo da Vinci and Youth for Europe) have learned a number of important lessons, although the fundamental problems described here still exist in a slightly altered form.”

dated its whole education and vocational training system with the aid of EU funds and by adopting concepts from other Member States, not least as a means of preparing its school and college-leavers for geographical mobility to other European countries and not only to Ireland's traditional migration countries, like the United Kingdom, North America and Australia. Spain, for instance, introduced important reforms to its education system after the dissolution of the Franco regime and in the course of democratisation and entry into the EC in the 1980s, which helped the country adapt to EC membership. After an interval these countries were followed by Portugal and the Netherlands, and later still by Denmark, which adapted their systems of vocational training with explicit reference to the EU debate. France, the United Kingdom and Germany have been least influenced up to now. These countries appear to be in serious competition with each other and wish to preserve their own “cultures” in respect of education and vocational training. They are only now beginning to show the first signs of change. They are meanwhile in the process of adapting certain details of their systems, but with indirect rather than direct reference to EU debates, resolutions, recommendations or decisions.

The programmes themselves had only little sustained influence in these countries. Social Fund interventions, the debate on the adaptation of legislation on recognising diplomas and comparative studies by CEDEFOP among others – e.g. in connection with the implementation of the 1985 Council Decision on the “Comparability of Vocational Training Qualifications between the Member States of the EC”, and the debate on structuring the standard of training in the EC (cf. Appendix 1 of the same Council Decision) – had, and indeed still have, a more decisive influence (Sellin 1996). From the 1960s and up to the present, EC and EU efforts to achieve progress on the recognition of vocational qualifications in compliance with Article 57, by harmonising legislation on access to occupations (cf. the relevant guidelines) have had a big impact.

These influences were already noticeable even in the late 1960s in the EEC of the Six. As a result of the debate on recognition, in particular with regard to engi-

neers, Germany, e.g., was obliged to raise the former upper specialised and engineering schools to the level of specialised institutions of higher education, introduce the certificate of aptitude for specialised short-course higher education and thus integrate them into the higher education sector.

Within Europe the different education systems have always been in competition, at least since the French Revolution, which to a certain extent replaced the hereditary aristocracy with an academic or educational aristocracy. The EU is attempting to steer this competition among the systems in the direction of promotion of reciprocal convergence or rapprochement, or even harmonisation (cf. also the 1963 general principles or the 1975 Regulation establishing CEDEFOP). The new Socrates and Leonardo da Vinci programmes, which have been running since 1995, are intended to make the different systems at least more compatible with each other, by promoting innovation in conjunction with transnational cooperation. The autonomy of the various systems is not to be undermined, however, as was sometimes attempted in the pre-Maastricht era by Brussels.

The centralist approach has brought about some results. It has not failed, as many maintain, but has been successful on a number of counts. A federal, or bottom-up, approach has only recently become discernible. If such an approach is to be successful, however, it will have to be accompanied by clear stipulations. This means: central stipulations must concur with local initiatives and projects or they must relate and adapt to each other. If this is achieved, both the programmes as a whole and specific projects can be very successful. It was rarely achieved in the implementation of the first generation of programmes, however, which was discouraging for both programme organisers and project makers on the one hand and of policy makers and vocational training practitioners on the other. A lot of enthusiasm and commitment has unfortunately been squandered, although all the effort was certainly not entirely in vain.

In the meantime, the new, second-generation EU programmes (Socrates,



Leonardo da Vinci and Youth for Europe) have learned a number of important lessons, although the fundamental problems described here still exist in a slightly altered form.

The second-generation programmes and the Leonardo da Vinci vocational training programme

There are three second-generation, post-Maastricht programmes: *Socrates*, the education programme, *Leonardo da Vinci*, the vocational training programme, and the *Youth for Europe* programme. *Socrates* is based on Article 126 of the Maastricht Treaty, while *Leonardo* is based on the guidelines of Article 127. It brings together most of the preceding vocational education and training programmes mentioned in the previous section, in particular *PETRA*, *Force* and *Lingua*. It aims to promote vocational training in the Member States comprehensively and encourage innovation while at the same time improving European cohesion. However, it must be borne in mind that these aims can only be achieved by complementing and supplementing the policies of the Member States, whose autonomy on education and vocational training issues must not be infringed upon.

While the financial resources for the 4-year period from 1995 to 1999 are somewhat higher than the sum at the disposal of the preceding programmes, it must still be regarded as relatively modest for the programmes' objectives and the growing problems of vocational training in the Member States. This is particularly true when compared with the financial resources of the Structural Funds or even with the related Community Initiatives (*Youthstart*, *Adapt*, *Now*, etc.) related to them (Sellin 1994).

There is therefore still a wide gap between aspirations and reality, although the discrepancy is not quite as glaring as in the most important predecessor programme, *PETRA*.

The improvements in comparison with the preceding programmes are:

- the Member States and their competent bodies are more involved in project selection and application of the unanimously defined criteria;

- public tenders have made the selection criteria, which are adjusted annually, more transparent and it has been possible to take more new organisations and projects into consideration;

- the social partners and the experts nominated by them were involved in the review of applications and the application of the criteria by the offices of the Commission;

- half of the projects were pre-selected by the countries themselves, the other half being selected primarily by the Commission;

- a clearer distinction is made between exchange and pilot projects on the one hand, and studies and analyses on the other.

Thus the decision-making process has been rendered reasonably transparent. Nonetheless, due to these procedures the path from application to approval is long and sometimes tortuous. Decisions are often made on grounds of balance, rather than for objective reasons. Results cannot keep pace with the programme's priorities, which change faster and faster from year to year. Most projects are designed to run for two years, but cannot keep their deadlines since it takes nearly a year before the money starts to come in. If the project organisers have no means of pre-financing their projects, which is often the case, they have to ask for an extension. Complementary funds are also a problem in many cases, since the EU only refunds up to about 75% of the overall expenditure.

The travel, interpreting and conferences expenses ensuing from national and EU-wide coordination processes; the offices which support the administration at EU and national levels, the efforts needed to draw up and disseminate information; the coordination of transnational cooperation across the projects and topics are all highly expensive activities. On the other hand they expedite the exchange of information and experience among the ad-



“In order to learn lessons from the current projects, lessons which go beyond the projects themselves, they need to be collated according to subject and method.”

“A combination of expert researchers, teachers and trainers, managers and administrative officials, practitioners from trade unions and enterprises is always necessary to make the complexities of vocational education and training transparent and to make progress, whether at individual project or system level, in the face of severe challenges”

3) Cf. The school experiment and the establishment of bilingual “State Europa Schools Berlin”, in which the partner language concept was developed and bilingual features in a combination of German with English, French, Russian, Polish, Turkish, Italian, Portuguese or Greek was very successfully introduced from pre-school level on.

ministrative officials and the social partners, but on the other hand, they seem to produce few concrete results. The project organisers themselves are beginning to complain of a lack of support in implementing planned innovations, studies and analyses. Their results are filed away either centrally at national level or at EU level in offices as was the case with the forerunner programmes. Whether they are made accessible to other users, published or kept available for new projects is an open question at present. This is the intention, but it remains to be seen whether the necessary money and personnel are actually at hand.

In order to learn lessons from the current projects, lessons which go beyond the projects themselves, they need to be collated according to subject and method. Some attempts have been made to do this in the hope of producing synergetic effects and ensuring complementarity. The Commission has formed such thematic clusters and issued invitations to a number of conferences. Further conferences are being planned for 1999 and 2000 in close cooperation with the Member States, to evaluate and disseminate results.

In view of the diversity of the project subjects, methods and areas of application and target groups, the selected themes or “clusters” were still not specific enough to be of real help to the projects, however. It also remains to be seen whether and to what extent the projects can deliver transferable lessons for innovation in the vocational training systems of specific countries, or at least for some aspects of their systems. Again, it is too early for a conclusive evaluation.

There are some indications that the assessment of the second generation of programmes will prove to be similar to that of the first-generation programmes, in spite of significant improvements in detail.

□ Leonardo da Vinci (and probably Socrates, too) is undertaking too much at once, i.e. is overloaded with objectives;

□ The project makers find it difficult to use the funds as they should and in compliance with objectives within the set schedule to ensure project continuity and a stable personnel framework.

□ The Member States involved are not obliged in any way to draw conclusions for their own policies, however successful the projects may be.

The success of the projects may be facilitated by the improved framework conditions and the involvement of decision makers at the relevant levels, but is still in question due to the aforementioned points, just as their predecessors' was. There is also a risk that studies and analyses will fall short of their objectives of affiliating with pilot projects and/or helping them to become part of the permanent system, because the political and institutional framework conditions are often against them. As separate activities within a programme, however, studies and analyses seem to fulfil other important functions which would not be fulfilled at all in their absence: preparing and following-up of projects, bridging the gaps between policy and practice, research and application, improving scientific bases/terminologies and methods for transnational comparison or cooperation, documenting successes and failures for posterity, etc.

The importance of studies and analyses as a separate axis should thus be emphasised. Innovation is essentially inspired by studies and analyses, and only secondarily by pilot projects. Exchange without documentation of participants' and providers' experience, without concentrating on current topics and subjects relevant to the context make little sense, as demonstrated by the vocational training experts' study visit programme coordinated by CEDEFOP. A combination of expert researchers, teachers and trainers, managers and administrative officials, practitioners from trade unions and enterprises is always necessary to make the complexities of vocational education and training transparent and to make progress, whether at individual project or system level, in the face of severe challenges.

Review

Questions – including questions at the European level – remain unanswered:

How can more effective progress be made towards the Europeanisation of vocational



training in support of common social, employment and education policies?

How can exchange programmes be organised to combine linguistic and intercultural competence more effectively with the acquisition of occupational competencies?

How can experience in neighbouring countries be guaranteed and appropriately recognised through the acquisition of particular training modules?

What support prospects do projects need in order to encourage permanent partnerships among training centres?

Should bilateral cooperation be given priority over cooperation between three or more countries, and how can such cooperation be strengthened and its continuity assured?

Training in foreign and partner languages, in particular, is neglected in programmes and projects. Foreign languages should increasingly be taught by native speakers and instruction in the first foreign or partner language should start early. In population centres, bilingual training for children from a bilingual environment could begin in nursery school and be on offer up to vocational school and the end of upper secondary education³. This possibility would seem to be an important prerequisite for the implementation of the political goal of language diversification in initial vocational training (European Commission 1995, White Paper). This should have positive repercussions for the projects and programmes, which should be spread over several countries if possible and not favour English, German and French-speaking countries.

The majority of *studies and analyses* within the framework of the Leonardo da Vinci programme should be designed to a greater extent as a scientific supervision of innovations and pilot projects. They should be in the nature of action research and thus contribute to evaluating, disseminating and multiplying results. At present, only isolated studies and analysis projects meet these requirements.

The competent bodies of the Member States should *formally undertake* to act

on the conclusions of successful projects, possibly with the support of the EU Structural Funds, at the appropriate levels of intervention, in the vocational training fields, regions or sectors and to restructure or expand the standard education and vocational training on offer. Their vocational training and continuing training legislation should be adapted accordingly.

Twenty-five years of flourishing transnational and Europe-wide cooperation in the education and vocational training sectors have made a real contribution to the development of the European Dimension and Integration. We are still, however, a long way from a European Education and Vocational Training Policy which merits the name. In May 1999, with reference to the chapter on employment in the Treaty of Amsterdam, objectives were approved at the highest level within the framework of the European Employment Pact to develop a European Labour Market while simultaneously combating disadvantages and discrimination in education and vocational training, ensuring equal opportunities, effectively combating long-term unemployment and unemployment among young people, improving access to vocational training and continuing training, etc. Before these objectives can be successfully achieved we shall need clear guidelines, indicators for the success or failure of national measures and programmes and also for EU programmes and EU fund intervention. *Top down* should meet *bottom up* and *vice versa*. We cannot afford to do away with *top* altogether. It is imperative to agree promptly on clearly defined criteria for the success and failure of activities in this connection, or, in the short or long term, this policy risks losing its credibility.

The increased participation of the European Parliament in decision-making processes, in accordance with the Treaty of Amsterdam, and the expansion of possibilities for qualified majorities at Council level, especially in the areas of vocational training and employment, should substantially improve the situation in the next few years. There is, however, still much to be done at all levels if we really want to make progress in modernising the systems and adapting the institutions responsible for the implementation of



education, vocational training and employment policies to meet the new challenges and achieve European Integration in these extremely important fields. A

social and citizen-friendly Europe will not come about on its own. *The Europeans* will have to demand it more strongly from their politicians.

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Annex

Vocational training action programmes, 1974-1999

Resolution of the Ministers of Education meeting within the Council of 6 June 1974 on cooperation in the field of education, OJ C 98 20.8.1974

Resolution of the Council and of the Ministers for Education meeting within the Council of 13 December 1976 concerning measures to be taken to improve the preparation of young people for work and to facilitate their transition from education to working life OJ C 308, 30.12.1976 (amended by Resolutions of 15 January 1980, OJ C 23, 30.1.1980, and of the 12 July 1982, OJ C 193, 28.7.1982).

European Commission Recommendation of 6 July 1977 on vocational preparation, OJ L 180, 20.7.1977.

Council Directive of 25 July 1977 on the education of children of migrant workers (77/486/EEC), OJ L 199, 6.8.1977.

Council Decision of 16 July 1979 establishing a second joint programme to encourage the exchange of young workers within the Community (79/642/EEC), OJ L 185, 21.7.1979.

Council Resolution of 18 December 1979 on linked work and training for work experience, OJ C 1, 3.1.1980.

Resolution of the Council and of the Ministers for Education meeting within the Council of 3 June 1985 containing an action programme on equal opportunities for girls and boys in education, OJ C 166, 5.7.1985.

The Comet I programme (1986-89) on cooperation between universities and enterprises regarding training in the field of new technology had a budget of ECU 45 million. It financed some 1 300 projects and established 125 university-enterprise training partnerships. The second phase of the programme, Comett II (1990-94) had a budget of ECU 200 million (including the EFTA contribution).

The Erasmus programme (1987-95), setting up the European Community action scheme for the mobility of university students, had a budget of ECU 500 million.

The Petra programme (1987-91) for the vocational training of young people and their preparation for adult and working life had a budget of ECU 40 million. Approximately 75 000 young people benefited directly from the programme, along with more than 10 000 teachers and trainers. Petra II (1992-94) had a budget of ECU 104.2 million.

The Lingua programme (1990-94) to promote foreign language competence in the European Community had a budget of ECU 153 million. More than 7 000 language teachers received in-service training and 33 000 teachers participated in exchanges.

Force (1991-94) focused on the quality and quantity of continuing vocational training (CVT). It had a budget of ECU 88 million and financed 720 projects involved in the transfer of expertise and innovation in continuing vocational training.

The Eurotecnnet programme (1990-94) to promote innovation in the field of vocational training resulting from technological change in the European Community had a budget of ECU 9.2 million. It provided funding for the networking of innovative projects in vocational training and for transnational research on specific themes linked to vocational training.

Helios (1988-91), and Helios II (1993-96) promoted the social integration and independent lifestyles of people with disabilities.

Helios II had a budget of ECU 37 million and enabled 1 150 organisations working for the disabled to take part on an ongoing basis in discussions and exchanges with similar organisations in other Member States.

IRIS (1988-93) was to increase women's awareness by making known training opportunities and to promote their training by helping to develop strategies and methods. It financed over 300 programmes throughout the Member States.

IRIS II (1994-98) continued to promote equality of opportunity in vocational training,

raise the profile of training for women, expand such training and establish and strengthen links throughout Europe. It had a budget of ECU 4 million.

Council Decision of 6 December 1994 establishing an action programme for the implementation of a European Community vocational training policy (94/819/EC), OJ L 340, 29.12.1994. (Leonardo I)

Decision of the European Parliament and of the Council of 14 March 1995 establishing the Community programme Socrates (819/95/EC), OJ L 87, 20.4.1995.

Council Decision of 26 April 1999 establishing the second phase of the Community vocational training action programme Leonardo da Vinci (99/382/EC), OJ L 146, 11.6.1999.



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Vocational training in Europe: individual and institutional determinants¹

Using data from the 1995 European Labour Force Survey for six European Countries: France, Germany, the Netherlands, Portugal, Sweden and the UK, the determinants of receiving vocational training, both on- and off-the-job, are analysed. This article argues that the training profile of each country considered is shown to be determined to a certain extent by its education system. In Germany for example, apprenticeship schemes are favoured and the typical trainee is young, not well qualified, and in a manual industry and occupation. In contrast, Sweden's vocational training takes place in the formal educational system, and so the firm-provided training is typically of middle-aged, well-qualified professionals. In the UK, training is not provided by the formal educational system, but the degree of vocational training provision does not seem to reach the levels that it does in, for example, Germany.

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Introduction

The merits of vocational training for the future growth of western economies continue to be advocated by researchers and politicians alike. As competition from the developing world increases, mass production of standardised products is not seen as the optimum response. Rather, it is thought that firms in advanced countries must concentrate on hi-tech goods and services, providing for the specialist needs of their customers. To do this however, a skilled workforce is required, both to use the increasingly advanced technology being implemented, and to create the flexibility in the labour input that allows the provision of specialist goods and services. Vocational training is an important means of generating such a skilled workforce. While state run schemes can be important for the development of skills, particularly of very low-skilled individuals such as school leavers with no qualifications, it is the firms that know their skill needs, and so are best placed to offer the training described above.

This article analyses the characteristics of the individuals receiving such vocational training. For example, is it males or females, the young or the old who are most likely to receive vocational training? Crucially for the upskilling argument presented above, is it the unskilled who are most likely to receive some training, or is it those individuals who already have a high level of formal skills?

The data to be used is described next, followed by a discussion of the results on training incidence and training intensity. Some conclusions end the article.

The data

The 1995 European Labour Force Survey (ELFS) is used to answer the questions posed in the introduction for six European countries: France, Germany, the Netherlands, Portugal, Sweden and the UK. The question used asks respondents whether they have received any education or training during the four weeks prior to the survey. Two of the possible responses are: 'received specific vocational training in a working environment (without complementary instruction at a school or college)' and 'received specific vocational training within a system which provides both work experience and complementary instruction elsewhere (any form of "dual system" including apprenticeship)'. These were labelled as on-the-job and off-the job training (although note that the latter category encompasses both). An overall training indicator was also created, with a value of one if the respondent answered positively to either of these options.

The data, as supplied by Eurostat, do not come in the form of individual observations. For every combination of the variables used in the analysis, the data reveal the number of individuals with those particular characteristics, weighted to the national populations. Since the focus of the article is on employees in receipt of vocational training, all observations for non-employees are filtered out. The number of respondents in each of the remaining variable permutation cells was summed, to give the total number of employees in each country. Summing the number of respondents in each variable permutation cell in which the training indicator took



the value of one, then gave the total number of respondents who received training. This was expressed as a proportion of the total number of employees. This analysis could be repeated for any single variable of interest, for example gender².

It should be clarified exactly who is included in this definition of training, but unfortunately this is difficult with the available data. The questionnaire is clear that individuals on an apprenticeship scheme should be captured by the second training option, that is training with an off-the-job component, since apprenticeships are explicitly mentioned in the question. Cross-tabulating this variable with the professional status variable reveals that respondents who answer yes to this part of the question are also almost always classified as employees, so we know that apprentices remain in our sample and are classified as receiving training, when the sample is reduced to employees only. It is less clear whether individuals on a government financed training scheme are included within the definition of training used here. The questionnaire does not explicitly mention such schemes, and so it is not obvious which of the education and training options available would be chosen by such a trainee. Even if they did tick one of the two training options being analysed, it is again not clear whether they would be classified as employees or in education, and so they might not survive the cutting down of the sample to employees only. The root of the problem is that the ELFS does not ask any questions about the financing of the training, making it impossible to identify those on government schemes, in order to determine where they appear in the data. Similarly, we cannot separately identify individuals who pay for their own training, and individuals on employer-funded courses.

There are some other problems associated with using ELFS data for analysing vocational training (see Felstead et al., 1998). First, the question only asks about a specific four week period, and so the data obtained only provide a 'snapshot' of training incidences at a particular point in time. We can say nothing about the total levels of human capital across different individuals. Another drawback, as

mentioned above, is that Eurostat will not provide the data in the form of individual observations, but only as grouped data. This makes the multivariate analysis more complicated than it would have been with the availability of individual data. Thus, the unit of observation is a single permutation of the explanatory variables, and the dependent variable is the proportion of individuals with that combination of characteristics who have received training in the four weeks prior to the survey. For the more unusual combinations of characteristics the cell sizes are quite small, and so the dependent variable may be measured with error in some cases.

Another problem with the ELFS is the lack of comparability across countries. Although the idea of the ELFS is that all EU countries ask equivalent questions in their national Labour Force Surveys, and send the data to Eurostat to construct a data set containing identical variables in all countries, this does not always work as it should. In the case of the training question outlined above, France and Portugal, of the six countries considered, only count training incidences that are actually underway at the time of interview. Additionally, in France, exclusively in-house training is not counted.

The issue of proxy respondents also reduces the reliability of the data. When a sampled respondent is unavailable for interview, a member of that individual's household is often asked to complete the questionnaire on his or her behalf, to remove the need for the interviewer to call again, with the resultant additional costs. Proxy interviews may particularly affect the analysis of the training questions in the ELFS. While the person conducting the proxy interview may well know, for example, the labour force status of the individual they are answering for, they might have less knowledge about incidences of training received, particularly if it was on-the-job and informal. Also it appears that proxy interviews are particularly prevalent amongst young respondents, and it is this group who are most likely to receive training.

Finally, it has been pointed out that the substantial revisions to the ELFS questionnaire in 1992 make an analysis of trends across this date very difficult.

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2) First the total number of respondents in each cell containing, say women, could be summed, then the total number of respondents in each cell containing women and trainees could be calculated, and expressed as a percentage of the former number to reveal the proportion of female employees who receive training.



“The relationship between training and prior qualification level (...) shows differences across countries. In Germany and France, there is an inverse relationship between these two variables, with about 70% of all observed training incidences being received by those in the lowest ISCED group (individuals who have, at best, completed the first stage of secondary education or equivalent).”

“(...) those with a fixed term contract are more likely to receive a spell of training in Germany, France and Portugal, and vice versa in Sweden, the Netherlands and the UK.”

“Data on establishment size suggest, somewhat contrary to previous research and economic theory, that smaller workplaces are more likely to train their employees in Germany, France and the UK.”

Despite all of these problems, there are benefits associated with using the ELFS to analyse the determinants of vocational training. It allows cross-country comparisons to be made, which is the focus of this article. Second, different types of training (whether an off-the-job component is included or not) can be identified. Finally, there are supplementary questions that supply information on the amount of time, both weeks per year and hours per week, that is spent training, thus providing details about the quality, as well as the quantity, of the training observed.

The incidence of training

Only employees, aged 15-64, are included in the analysis. The first result to note is that the incidence of vocational training differs across the six countries under consideration. The rate is highest in Sweden, where 10% of employees received some form of training in the four weeks prior to the survey. The country with the next highest rate is the UK on 7.3%, followed by the Netherlands on 5.3% and Germany on 4.9%. In both France and Portugal, fewer than 1% of employees report receiving training, due to the problems with the training question in those two countries, as described above.

These figures represent the average training rates in each country, and they vary with the employee characteristics, when we consider cross-tabulations between the training variable and each explanatory variable in turn. The gender differences are small in all countries, but there are large age differences in training rates. In every country except Sweden, the youngest age group has the highest training rate. For example, in Germany two-thirds of all 15-20 year old employees received some sort of vocational training during the period in question, compared to one-quarter in France and the UK, and less than 10% in Sweden, the Netherlands and Portugal. 73% of all observed training incidences in both Germany and France go to 15-20 year olds. In Sweden the 41-50 year old age group has the highest training rate.

The relationship between training and prior qualification level similarly shows differences across countries. In Germany and France, there is an inverse relation-

ship between these two variables, with about 70% of all observed training incidences being received by those in the lowest ISCED group (individuals who have, at best, completed the first stage of secondary education or equivalent). In Germany, one in four such individuals received some training during the four weeks in question. In the Netherlands, individuals whose highest qualification is in the middle ISCED bracket (up to the completion of the second stage of secondary education or equivalent) are the most likely to receive training, while in the remaining three countries, it is those at the highest ISCED level (a university degree or equivalent) with the highest training rate (reaching almost 15% in Sweden).

Another group of variables considered the job being performed. With respect to tenure in current employment, there is an inverse relationship between this and the probability of vocational training receipt in France, Germany and the UK, and a positive relationship in the Netherlands, Portugal and Sweden. With respect to the temporary or permanent nature of the job being performed, those with a fixed term contract are more likely to receive a spell of training in Germany, France and Portugal, and vice versa in Sweden, the Netherlands and the UK. Full-time employees are more likely to undertake training in all countries except France and Portugal, where we know there are problems with the data. Data on establishment size suggest, somewhat contrary to previous research and economic theory, that smaller workplaces are more likely to train their employees in Germany, France and the UK.

With respect to industry and occupation a definite pattern emerges across the six countries. In Germany and France, the industries and occupations with the highest training rates are typically manual and traditionally low-skill, such as construction, wholesale/retail trade and hotels and restaurants with respect to sector and craft workers, shop workers and agricultural workers in terms of occupation. In the Netherlands and the UK, the same sectors and occupations emerge as frequent trainers, but they are joined by more professional, high skill industries, such as finance, health/social work and education,



Table 1 :
The determinants of vocational training receipt - minimum chi-squared estimates

Variable	Germany	France	Netherlands	Portugal	Sweden	UK
Female	-0.135*** (0.025)	-0.232*** (0.045)	-0.098*** (0.034)	-0.199*** (0.039)	0.211*** (0.044)	0.101*** (0.021)
Age 15-20	2.448*** (0.056)	3.053*** (0.104)	1.476*** (0.083)	0.040 (0.084)	-0.045 (0.221)	1.393*** (0.046)
age 21-30	1.189*** (0.052)	1.138*** (0.100)	0.607*** (0.061)	-0.074 (0.058)	-0.021 (0.061)	0.233*** (0.031)
age 31-40	0.439*** (0.055)	0.406*** (0.101)	0.372*** (0.058)	0.122** (0.054)	0.094* (0.051)	0.151*** (0.029)
age 41-50	0.558*** (0.059)	-0.708*** (0.109)	0.080 (0.060)	-0.057 (0.054)	0.022 (0.049)	0.053* (0.029)
ISCED high	-1.505*** (0.048)	-0.508*** (0.085)	-0.641*** (0.052)	-0.035 (0.075)	0.428*** (0.059)	0.163*** (0.027)
ISCED medium	-1.017*** (0.025)	-1.057*** (0.035)	-0.375*** (0.038)	0.299*** (0.048)	0.082 (0.055)	0.104*** (0.023)
tenure +6 years	-0.473*** (0.037)	-0.226*** (0.072)	-0.232*** (0.044)	0.151*** (0.042)	-0.251*** (0.059)	0.249*** (0.023)
tenure 1-5 years	0.224*** (0.021)	-0.189*** (0.032)	0.281*** (0.042)	0.155*** (0.044)	-0.038 (0.064)	0.143*** (0.019)
full-time	1.320*** (0.052)	0.136*** (0.044)	0.456*** (0.035)	-0.387*** (0.068)	0.096* (0.050)	0.318*** (0.028)
permanent	-1.978*** (0.022)	-2.056*** (0.054)	0.998*** (0.083)	-0.413*** (0.055)	-0.083 (0.083)	-0.272*** (0.044)
11-19 employees	-0.046 (0.035)	-0.060 (0.051)	0.479*** (0.074)	0.350*** (0.062)	-	0.331*** (0.042)
20-49 employees	-0.043 (0.033)	0.110 (0.415)	0.224*** (0.065)	0.241*** (0.054)	-	0.206*** (0.035)
50+ employees	-0.192*** (0.027)	-0.163 (0.373)	0.355*** (0.053)	0.196*** (0.047)	-	-0.169*** (0.031)
constant	-2.253*** (0.083)	-4.259*** (0.142)	-4.226*** (0.140)	-5.241*** (0.120)	-1.972*** (0.141)	-2.331*** (0.094)
industry dummies	yes	yes	yes	yes	yes	yes
occupation dummies	yes	yes	yes	yes	no	yes
number of observations	21270	7931	10434	2407	1639	16509
R2	0.639	0.772	0.184	0.760	0.223	0.191

Note: Standard errors in parentheses

* = significant at 10% level

** = significant at 5% level

*** = significant at 1% level

and occupations, such as professionals and technicians or associate professionals. In Sweden in particular, and to a lesser extent in Portugal, it is the latter, professional industries that dominate in terms of their training rates.

The above results are all cross-tabulations, and thus it is important to perform a multivariate analysis of the determinants of the vocational training received, so that the independent effect of each variable can be evaluated, holding the effects of



“Female employees are significantly less likely to receive training than males in Germany, France, the Netherlands and Portugal, although perhaps surprisingly, the reverse is true in Sweden and the UK.”

“The coefficients on the education variables show that the often-reported result that the more highly educated are more likely to receive vocational training is found only in Sweden and the UK.”

all other variables constant³. The results are contained in Table 1. The coefficients indicate the percentage point rise in the probability of receiving training if the variable in question holds, holding the effects of all other variables constant. Note that the variance of the estimator is inversely proportional to the number of observations, as described in Greene (1993), thus explaining the large t-statistics in the table.

The results are largely in line with the cross-tabulation results described above. Female employees are significantly less likely to receive training than males in Germany, France, the Netherlands and Portugal, although perhaps surprisingly, the reverse is true in Sweden and the UK. None of the estimated effects are very large, however.

The age effects, on the other hand, are very large. In Germany, France, the Netherlands and the UK, we see significant differences in the probability of training between the youngest age group and the oldest, rising to over three percentage points in France. In Sweden and Portugal, however, the only age group with a statistically significant coefficient is the 31-40 year old group, who have a higher training probability than the over-50s in both countries.

The coefficients on the education variables show that the often-reported result that the more highly educated are more likely to receive vocational training is found only in Sweden and the UK. In addition, there is a statistically significant positive coefficient on the medium ISCED variable in the Portuguese equation. In the other three countries, however, formal education is inversely related to the training probability, with the effect being particularly pronounced in Germany where the low ISCED group have a 1 and a 1.5 percentage point higher probability of receiving training than the medium ISCED and the high ISCED groups respectively.

The grouping of the countries with respect to their results varies somewhat when job tenure is considered. In this case, it is France and Sweden that are grouped together in being the two countries where employees with less than one

year's tenure are the most likely to receive training. In Germany and the Netherlands, there is an inverted-U relationship, whereby the training probability initially rises when we consider 1-5 years of tenure rather than less than one year, but falls again to a lower level than originally amongst the employees with the longest tenure. As for Portugal, the probability of receiving training rises after one year on the job, but stays constant after that. Finally in the UK, there is monotonic increase in the probability of training as job tenure rises. None of the tenure effects are very large, however, with the widest difference in training probabilities being just under one-half a percentage point between the longest and the shortest tenure employees in Germany.

The expected result that those who work full-time are significantly more likely to receive vocational training than part-time workers is found in every country except Portugal. More surprisingly, when the permanent or temporary nature of the job is considered, the training probability is often significantly higher amongst those on fixed term contracts. Only in the Netherlands do permanent employees receive significantly more training, while the difference is statistically insignificant in Sweden.

Finally, the coefficients on the workplace size dummy variables indicate that larger workplaces are significantly more likely to train their employees in the Netherlands and Portugal, and also in the UK with the exception of the very largest establishments. In Germany, however, the only statistically significant workplace size effect is on the largest size category, and is negative. None of the establishment size effects are very large, however.

As described above, the ELFS data allow us to distinguish between training that is exclusively on-the-job and training that has an off-the-job component⁴. The former category dominates in all countries except Germany, where only 8% of training incidences are exclusively on-the-job, compared to 61% in the UK, 63% in Portugal, 67% in the Netherlands and 71% in Sweden. When the determinants of each is considered in turn, some interesting differences emerge. The key differences are highlighted in Table 2.

3) Because the dependent variable is expressed as a proportion (that is, the proportion of the employees with each permutation of characteristics who receive training, as described above) a minimum chi-squared, weighted least squares estimator was used.



Table 2 :
The determinants of on-the-job and off-the-job training, identified separately -
key results, minimum chi-squared estimates

	Germany	Netherlands	Portugal	Sweden	UK
on-the-job					
age 15-20	0.790*** (0.073)	0.941*** (0.088)	0.009 (0.074)	0.048 (0.206)	-0.094 (0.075)
age 21-30	1.118*** (0.048)	0.389*** (0.059)	-0.059 (0.052)	0.009 (0.065)	0.145*** (0.030)
age 31-40	0.528*** (0.049)	0.216*** (0.055)	0.038 (0.048)	0.141*** (0.055)	0.090*** (0.028)
age 41-50	0.630*** (0.052)	-0.007 (0.056)	-0.041 (0.048)	-0.001 (0.053)	0.031 (0.028)
ISCED high	0.066 (0.052)	0.411*** (0.063)	-0.068 (0.067)	0.331*** (0.062)	0.223*** (0.027)
ISCED medium	0.282*** (0.042)	0.551*** (0.055)	0.153*** (0.043)	0.091 (0.058)	0.217*** (0.024)
off-the-job					
age 15-20	2.732*** (0.058)	2.427*** (0.101)	0.040 (0.083)	-4.231*** (0.525)	3.741*** (0.064)
age 21-30	1.543*** (0.055)	1.455*** (0.091)	-0.074 (0.058)	-0.231*** (0.079)	1.850*** (0.059)
age 31-40	0.542*** (0.060)	0.980*** (0.090)	0.122** (0.054)	0.308*** (0.065)	1.135*** (0.061)
age 41-50	0.311*** (0.066)	0.659*** (0.093)	-0.056 (0.054)	0.187*** (0.060)	0.825*** (0.065)
ISCED high	-2.033*** (0.052)	-3.049*** (0.088)	-0.034 (0.075)	0.396*** (0.076)	0.053 (0.045)
ISCED medium	-1.086*** (0.023)	-0.934*** (0.035)	0.299*** (0.048)	-0.025 (0.072)	0.042 (0.031)

Note: Standard errors in parentheses.

***=significant at 1% level, **=significant at 5% level, *=significant at 10% level.

Key results only reported. All regressions contain the same explanatory variables as those in Table 1.

We saw previously that in all countries except Portugal and Sweden, the young are more likely to receive training. Table 2 reveals that this is particularly the case for training with an off-the-job component, where the age coefficients are very large and suggest that the probability of 15-20 year olds receiving training is 2.4-3.7 percentage points higher than for those over 50 years old. These numbers dwarf the age coefficients in the on-the-job training equations, which only once exceed 1 percentage point, although they remain statistically significant in Germany and the Netherlands.

The other variable to have markedly different effects on the two types of training

is prior education. A strong negative effect of this variable on training with an off-the job component is observed in Germany and the Netherlands, suggesting training probabilities for the highly skilled that are 2 and 3 percentage points lower than those of the low skilled, respectively. This was clearly driving the negative results for the overall incidence of training in these two countries (as well as in France, where all reported training has an off-the-job component). When exclusively on-the-job training is considered, the more usual positive relationship between prior education and training is observed in Germany and the Netherlands. In addition, the positive education effect observed on the overall level of training

4) The distinction cannot be made in France, because exclusively on-the-job training is not included in the data.



Table 3 :
Time spent in vocational training, if training received in the four weeks prior to survey (%)

	Time	Germany	France	N'lans	Portugal	Sweden	UK
all training	<1 week	29.93	9.28	32.26	0.00	75.88	86.25
	1 week - 1 month	6.78	26.66	22.87	69.52	17.34	7.07
	1 month - 3 months	2.08	17.68	9.82	0.00	4.56	2.36
	3 months - 6 months	1.50	14.65	5.92	1.31	1.25	0.85
	6 months - 1 year	2.03	9.81	17.22	18.79	0.34	0.72
	1 year or longer	57.67	21.92	11.91	10.37	0.63	2.75
on-the-job training	<1 week	46.69	-	34.09	0.00	76.73	89.13
	1 week - 1 month	26.04	-	24.35	72.37	16.57	7.20
	1 month - 3 months	4.21	-	11.61	0.00	4.65	2.29
	3 months - 6 months	4.31	-	6.30	0.00	1.13	0.59
	6 months - 1 year	5.33	-	15.11	25.20	0.28	0.35
	1 year or longer	13.41	-	8.54	2.43	0.64	0.43
off-the-job training	<1 week	26.43	9.28	26.43	0.00	73.73	27.06
	1 week - 1 month	2.76	26.66	18.13	65.04	19.27	4.38
	1 month - 3 months	1.64	17.68	4.12	0.00	4.36	3.82
	3 months - 6 months	0.92	14.65	4.70	3.38	1.57	6.12
	6 months - 1 year	1.34	9.81	23.96	8.71	0.46	8.38
	1 year or longer	66.91	21.92	22.66	22.87	0.61	50.23

in the UK is found only to exist in the case of exclusively on-the-job training. In Portugal and Sweden, the positive influence of education is observed on both types of training, although the estimated effects are small.

The intensity of training

The ELFS also provides data on the time spent in training, if a training incident is reported, in terms of the total number of weeks, and the average number of hours per week. It would be an easy matter to tabulate the responses to these questions. However such a table for the weeks of training would be misleading, because the question is asking about the four weeks prior to the survey only. A training spell of a year would show up within this period no matter at what point in the year it began. At the other extreme, a spell lasting under one week would have to begin either during the four week period being asked about, or in the week before this period, if it was to show up in the data.

Thus, all training spells lasting a year or more will be included in the data, while only a small proportion of those lasting under a week will be included. In general, the likelihood of the training spell being recorded in the data set will vary in direct proportion to the length of the spell. Therefore a simple tabulation of the weeks of training variable would suggest that training spells in a country are, on average, longer than they actually are. Thus the responses were re-weighted to take account of this problem, applying a weight to each spell length that was inversely proportional to the probability of spells of that length being recorded in an annual survey. Tables 3 and 4 report the results, for any kind of training, and then separately for exclusively on-the-job training and training with an off-the-job component.

Training is clearly most time intensive in Germany, of the six countries considered here. Even when the data are re-weighted to allow for the fact that many short du-



ration spells will not be captured by the survey, over half of all training incidences reported in Germany last for at least one year. Similarly with respect to hours of training per week, over 75% of all training incidences in Germany are full-time, in terms of comprising at least 21 hours training per week. No other country's statistics can come close to matching those of Germany. Just over one in five training spells in France last for one year or more, with this figure being just over one-tenth in the Netherlands and Portugal. France and Portugal are also quite close in terms of hours per week, with just over one-half of training spells involving an average of over 20 hours per week in both countries. However, on this measure, the Netherlands joins the two low-intensity countries, Sweden and the UK, with over 90% of all training incidences falling into the '20 hours per week or fewer' category. In Sweden, three-quarters of all spells last a week or less, with a further 17% lasting no longer than a month, while only 16% comprise over 20 hours per week, on average. Finally, the UK appears to have the lowest intensity, in that 86% of all training spells last for one week or less, and 80% are for 20 hours or under per week.

When the training spells are divided into exclusively on-the-job training, and training with an off-the-job component, it is clear that the latter type typically last longer than the former. In all countries, the majority of on-the-job training spells last for a month or less, and are for 20 hours per week or less. The ordering across the countries in terms of length remains the same as that for the composite training measure. With regards to training with an off-the-job component, we observe two-thirds of all such training spells lasting for over a year in Germany, and almost 80% taking up over 20 hours per week. In terms of weeks Germany is followed, perhaps surprisingly, by the UK, where one-half of off-the-job training spells are of over one year's duration, although only one-third are for more than 20 hours per week. France, the Netherlands and Portugal all have just over 20% of off-the-job training spells lasting longer than a year, although they vary in terms of hours per week. Portugal has over three-quarters of its off-the-job training spells lasting for more than 20 hours a

Table 4 :

Hours spent in vocational training, if training received in the four weeks prior to survey (%)

	hours	Germany	France	N'lands	Portugal	Sweden	UK
all training	01-20	23.03	48.81	93.08	41.97	83.57	80.23
	21-40	73.09	39.38	6.92	56.55	16.00	16.08
	41-60	1.41	11.02	0.00	1.49	0.36	2.94
	61-80	0.67	0.79	0.00	0.00	0.07	0.65
	81+	1.80	0.00	0.00	0.00	0.00	0.11
off-the-job training	01-20	60.37	-	92.49	54.11	85.00	82.54
	21-40	37.95	-	7.51	43.46	14.58	14.39
	41-60	1.63	-	0.00	2.43	0.34	2.31
	61-80	0.04	-	0.00	0.00	0.09	0.65
	81+	0.00	-	0.00	0.00	0.00	0.12
off-the-job training	01-20	15.98	48.81	94.96	22.85	80.02	56.44
	21-40	79.72	39.38	5.04	77.15	19.57	33.44
	41-60	1.37	11.02	0.00	0.00	0.40	9.50
	61-80	0.79	0.79	0.00	0.00	0.00	0.61
	81+	2.14	0.00	0.00	0.00	0.00	0.00

week, France has 40%, while in the Netherlands we again observe the prevalence of part-time training, with only 5% of off-the-job spells taking up more than 20 hours per week. In Sweden, even when considering off-the-job training, almost three-quarters of such spells last less than a week. Portugal also has a majority of off-the-job spells lasting less than one month.

Finally, Table 5 contains some very approximate calculations of the average spell lengths of training in each country. The calculations are only approximate, because of the grouped nature of the time variables. The mid-points of each group were calculated (for example, individuals reporting 6-12 months of training were assigned 9 months for the purpose of the calculation). Respondents reporting over one year of training were arbitrarily assigned one and a half years of training. The number of weeks was then multiplied by the number of hours per week to give a rough estimate of the total number of hours that each spell lasted. The numbers were weighted as before, to allow for the higher probability of observing a longer spell. Across all employees, therefore including those who receive no train-

“Just over one in five training spells in France last for one year or more, with this figure being just over one-tenth in the Netherlands and Portugal.”



**Table 5:
Average length of training spells (hours)**

	Germany	France	N'lands	Portugal	Sweden	UK
all individuals	82	1	27	1	12	46
all trainees	1360	567	222	354	28	135
all on-the-job trainees	381	-	186	331	26	34
all off-the-job trainees	1545	567	335	389	33	1220

“In Germany, the typical trainee is young and has no formal qualifications beyond compulsory education. He or she is in a full-time but temporary position, in an industry and occupation usually classified as manual or low-skilled.”

“The pattern of results appears to be similar in France to that in Germany, in terms of the characteristics (...). It would, however, be inaccurate to conclude most French trainees are undertaking an apprenticeship (...).”

“The typical Swedish employee in training is middle-aged and well-qualified, and is working full-time in a non-manual or professional industry and occupation.”

ing, the average spell length is longest in Germany, at 82 hours. Thus, although the reported incidence rate is low in Germany, the total amount of training is clearly higher than in any other country, the average number of hours being almost twice as high as in the next ranked country, the UK. In this row of the table, the UK clearly benefits from its high incidence rate, offsetting its low intensity. Similarly, France and Portugal are affected by their very low incidence rates, which in turn are the result of data problems outlined earlier. The second row considers the average training length, amongst those who have received training, thus abstracting from the incidence issue and focussing only on intensity. Germany's position as leader is strengthened by doing this, the average length of a training spell being 1360 hours, with France a long behind in second place with 567 hours. As the focus is now only on intensity, the UK now slips behind both the Netherlands and Portugal into fifth place, with an average spell length of 135 hours. Training in Sweden is the least intensive, with an average spell length of just 28 hours.

Differentiating between the two types of training, the result that off-the-job training spells are longer than on-the-job spells is demonstrated in all countries. With respect to on-the-job spells, we see a similar pattern across countries as with the composite training measure, although Portugal is a lot closer to Germany. With respect to off-the-job training we again observe the relatively strong position of the UK, with an average spell length of 1220 hours, which trails only the German figure of 1545 hours. Even when only off-the-job training is considered, the average spell length is still only 33 hours in Sweden.

Conclusion

The results from an analysis of the training data in the European Labour Force Survey, as presented above, allow us to build a picture of the training in each country. In Germany, the typical trainee is young and has no formal qualifications beyond compulsory education. He or she is in a full-time but temporary position, in an industry and occupation usually classified as manual or low-skilled. The training is intensive, lasting over a year in the majority of cases, and taking up more than 20 hours per week on average. This picture is therefore strikingly one of an apprenticeship trainee in the German 'dual system.'

The pattern of results appears to be similar in France to that in Germany, in terms of the characteristics of those who receive training, although training intensity is lower in France. It would, however, be inaccurate to conclude most French trainees are undertaking an apprenticeship, as appears to be the case in Germany. Casual observation reveals that the apprenticeship system is not as developed in France as it is in Germany. The reason for the obtained results is therefore likely to be the problems with the French data, as outlined above. In particular, the training question only asks about training with an off-the-job component, and exclusively on-the-job training is excluded. Thus individuals undertaking an apprenticeship (ie an example of training with an off-the-job component) will be over-represented among those receiving training, as measured by the ELFS. In all countries except Germany, exclusively on-the-job training dominates in terms of numbers, and if this is also the case in France, the picture of the typical French trainee could change significantly if on-the-job training was included. This is clearly a case where more effort is required to make the data comparable across countries.

At the opposite end of the training spectrum, amongst the countries considered here, is Sweden. The typical Swedish employee in training is middle-aged and well-qualified, and is working full-time in a non-manual or professional industry and occupation. Although Sweden has the highest incidence rate of training, it also



has the lowest intensity rate. Most of the training reported in Sweden is for less than 20 hours a week, and lasts for one week or less. It would seem that most vocational training in Sweden is short 'top-up' courses directed at the already skilled. A possible reason for the prevalence of such training in Sweden could be the observed long job tenure in that country, which necessitates upgrading of skills amongst existing workers in a particular firm, as the processes used are updated.

Between the two extremes of Germany on the one hand, and Sweden on the other, lie the remaining countries, which share characteristics with countries at both ends of the spectrum. For example, in the UK, the education group with the highest training rate is the high ISCED group, while professional industries and occupations such as finance, education and health/social work industries, and professional and associate professional occupations, figure prominently. This is particularly the case with respect to exclusively on-the-job training. On the other hand, the young are most likely to receive training, particularly off-the-job, and construction is the sector with the highest training rate. With respect to intensity, most courses are of short duration, but there is also a core of one-half of off-the-job training spells lasting longer than a year. While most training is of the 'top-up' variety in on-the-job training, as seen in Sweden, therefore, the UK also seems to be making some effort to train its young, low-skilled employees, along the lines of the German model. The pattern is similar in the Netherlands, where the highly skilled in professional industries and occupations dominate in on-the-job training, while the young, less highly skilled employees in manual industries and occupations receive a lot of training with an off-the-job component. Although there are far fewer short duration courses in Netherlands, relative to the UK and Sweden, there is also an absence of many intensive courses, over 90% being for 20 hours per week or less. Finally, the data for Portugal are not very reliable, but the pattern of training seems to be similar to that in the Netherlands.

It can therefore be concluded that the pattern of vocational training in a country is largely determined by the system of

education in that country. This was essentially the conclusion reached by Beret and Dupray (1998) who stated that 'One may therefore posit that the manner in which skills are imparted under the education system partly determines the extent and level of in-company continuous training, which in turn will determine access to training and its effects'. Thus, for example in Germany since 1969, most individuals who do not go on to higher education go through an apprenticeship scheme, so that two-thirds of all labour market entrants have an apprenticeship qualification. Apprentices are given a temporary position in a firm, typically for three years, and taught the skills necessary to work in that occupation or sector. Teaching takes place both on-the-job within firms, and also in classrooms outside the firm (hence the 'dual' system). Through such methods, individuals are provided with the skills that are required to keep the German economy competitive and progressive. Therefore, the apprenticeship 'dual system' bears the brunt of skills formation, rather than formal education in Germany.

The fact that most of the training we observe in Germany is actually apprenticeship training is revealed by the age structure of the trainees, the prior skill level (almost always no higher than the end of compulsory schooling) and the temporary nature of their employment. Indeed, when 15-20 year olds are excluded from the analysis, the profile of the typical German trainee changes somewhat in that the differences in training rates across categories of demographic characteristics, particularly ISCED levels, are not so stark. In addition, in response to a question asking about the nature of the training, 92% of respondents in Germany said that their training was initial training. France is the only other country with a majority of respondents undertaking initial training (69%), while in the remaining countries, continuing training clearly dominates. Thus, to a large extent the results presented above for Germany are driven by the presence of large numbers of apprentices.

In the UK, vocational skills are in general not taught within formal compulsory education, and therefore it needs to supply such skills through vocational training.

"(...) in the UK, the education group with the highest training rate is the high ISCED group, while professional industries and occupations such as finance, education and health/social work industries, and professional and associate professional occupations, figure prominently."

"(...) in the Netherlands, (...) the highly skilled in professional industries and occupations dominate in on-the-job training, while the young, less highly skilled employees in manual industries and occupations receive a lot of training with an off-the-job component."



While vocational training has increased in the recent past through the introduction of the NVQ system and the Modern Apprenticeship scheme, the above results make it clear that the UK cannot yet match Germany. The intensity data show that most training in the UK remains of very short duration, with few training spells matching the year-long, more than 20 hours per week model of German training. In addition, the results reveal that overall, the employees with the highest training rate are those who already possess a degree or an equivalent qualification. As a result, the UK continues to have much a larger proportion of its working population at the unskilled level of ISCED 2 or below. It is true that, when only off-the-job training is considered, spell lengths are impressively close to those in Germany, but the problem is that such training courses are a minority of the total number of courses.

In the Netherlands, there is a mixed system, with some individuals receiving initial training within an apprenticeship sys-

tem, while others remain in full-time formal education to receive their vocational education. Thus, we observe a mixed pattern amongst the trainees in the Netherlands. While those undertaking training with an off-the-job component appear similar to the apprentices in Germany, there are a significant number in exclusively on-the-job training who are already well-educated and in good jobs.

Finally, the results show that although Sweden has the highest incidence rate, the training is of a very low intensity, and is typically undertaken by middle-aged, well-qualified, professional employees. However, this training profile is again determined by the education system, with vocational training being offered within the formal education sector in Sweden. Thus, the reason firms do not train young unskilled employees is because their workers have already emerged from schooling with the necessary skills, and so Sweden has a low proportion of low-skilled individuals within its population, despite this lack of initial workplace training.

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Multilingual School Education as a Key Qualification in the European Employment Area

The European Union is a unique linguistic and cultural area. Nowhere in the world do so many different cultures and language groups live so closely together. Fifteen states have taken this proximity as the starting point for creating a common union. There is no model for this union, which must be given a novel form. Comparable economic and political areas have permitted only one, or in the case of Canada, two official languages. India and African states resolve the language issue by introducing an international vehicular language through the school system, so as to draw the different language groups closer together. In the EU, neither is this planned nor does any country dream of subordinating its cultural and linguistic independence to a common official language. The linguistic complexity of the EU is greatly increased by the presence of minorities which have always lived in many EU countries. Their languages are indeed being strengthened rather than weakened by the process of European integration. In addition, there are the new minorities that have arrived as migrants since the 1950s. These circumstances mean that the majority of the citizens of Europe do not live in a monolingual environment but encounter foreign languages on a daily basis. The presence of more than one language group is the norm, especially in larger towns and cities. The EU is thus a language area that is unique world-wide, where all the major languages of the Western world are spoken alongside other national languages. Millions of migrants have in addition brought Turkish and Slavonic languages¹.

The EU has thus become a unique interface between the languages and cultures of the world.

Language knowledge as a factor in integration

In an area marked by such a wide range of indigenous cultures and languages, the aim must be to overcome the language barriers now that the customs barriers are down (Finkenstaedt, Schröder 1990). But languages are not barriers that can be retained or removed at will. The various languages will always mark off differences: the question is simply whether large numbers of people are to be fluent in more than one language, can reconcile them cognitively in their heads and evaluate them with understanding. The only alternatives are either that the multiplicity of languages holds up the process of integration, or that it becomes an intercultural network through which people come to get to know and understand one another. Languages do not communicate with each other. Only multilingual people can build bridges of understanding and open paths to dialogue.

Against a background of general recognition of the relevance of language learning, it is noticeable at the same time that the distribution of language knowledge varies widely in many respects among the population of the EU. In general, knowledge of foreign languages is increasing among younger people in all countries,



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The EU principle of 'free movement' cannot be implemented by means of a vehicular language but requires a thorough knowledge of the language of the country in which one wishes to work. This being so, the intention here is to show how the demanding goals of learning associated with multilingualism can be widely attained.

1) Between 1990 and 1997, over 2 325 000 immigrants from Central and South-East Europe migrated to Germany alone, 75% of them from the former USSR (Ausländer in Deutschland, Vol. 15, No 1 (1999), p. 8).



“In general, knowledge of foreign languages is increasing among younger people in all countries, but varies greatly from country to country... In consequence, young Europeans cannot necessarily converse in a common language even today.”

“In addition to a knowledge of languages, the ability to use those languages actively and functionally is called for: only in that way do they become relevant to employment. Expectations thus include the ability to interact successfully with members of the other language community and... to understand their _mentality_. It is therefore not merely a question of knowing a language, but of the ability to communicate spontaneously and actively and of intercultural skills, which language teaching cannot adequately convey by itself.”

but varies greatly from country to country². While Luxembourg educates absolutely all children in three languages and the Danes and Dutch possess an excellent knowledge of languages, the larger countries remain in the forefront of monolingual schooling, in which foreign languages are taught only later. In consequence, young Europeans cannot necessarily converse in a common language even today. The crucial change in the development of language acquisition over the last 20 years has merely been that knowledge of English has grown considerably among younger people. While this skill itself is associated with educational success, around a third of young people still cannot talk a foreign language, even though more than 90% of them have received foreign language teaching³. The wide gulf between education and active language knowledge thus represents a wide gulf between nations, and between social groups and minorities who, with few exceptions, continue to achieve considerably lower grades at the end of formal education. The relationships between groups are in fact not being determined by the forces of integration, but are increasingly being influenced by an emphasis on ethnic identity, the drawing of ethnocentric boundaries, and even violence against ‘the others’. Against this background, a knowledge of the languages of ‘the others’ acquires outstanding importance for integration and for the political and cultural, social and occupational future of Europe.

Expectations of the world of work

The positive correlation between high income levels and a knowledge of languages has been demonstrated throughout Europe⁴. This suggests that a knowledge of languages is a prerequisite for access to a successful career. This connection will in future not only relate to a knowledge of English, French and German but also to the other European languages. It will also relate not only to senior positions but increasingly to middle-level careers. According to Robert Picht, steel companies operating internationally need not only managers with language skills but also trained fitters who both

speak foreign languages and know how to get along with the ‘mentality’ of their neighbours (Picht 1992). What has largely applied up to now in international companies will increasingly be expected of the service sector as well. Heads of personnel in German banks have, for instance, started asking applicants not just for a knowledge of English, which was a requirement in any case, but also for a knowledge of other European languages. In many branches of the law, insurance and counselling, in hospitals and city government, minority languages are also called for.

Language-specific expectations in the world of work fall into two areas:

The range of relevant languages

It is no longer adequate to have learnt English as the international vehicular language. In Germany, there is growing demand for languages such as Italian, Spanish, Russian and Turkish, to which too little attention is paid in the teaching of foreign languages.

Active, functional language experience

In addition to a knowledge of languages, the ability to use those languages actively and functionally is called for: only in that way do they become relevant to employment. Expectations thus include the ability to interact successfully with members of the other language community and - additionally - to understand their ‘mentality’. It is therefore not merely a question of knowing a language, but of the ability to communicate spontaneously and actively and of intercultural skills, which language teaching cannot adequately convey by itself.⁵

Some years ago, Ernst Piehl (CEDEFOP) was already stressing that a knowledge of languages was not only a requirement in senior positions but also more generally a passport to new employment opportunities (Piehl, 1992). Moreover, a knowledge of languages is the key qualification for occupational mobility within the EU. The EU principle of ‘free movement’ cannot be implemented by means of a vehicular language but requires a thorough knowledge of the language of the country in which one wishes to work. This being so, the intention here is to

2) European Commission: Key Data on Education in the EU, Luxembourg 1995, p. 68f.

3) Idem, p. 69.

4) Idem, p. 70f.

5) Both areas, a knowledge of European languages and intercultural experience, were in the minds of the Europeans from the outset when they set up the Lingua programme, subsequently continued through the Socrates and Leonardo programmes.



show how the demanding goals of learning associated with multilingualism can be widely attained.

Structural requirements for European language education

A new approach to language education for Europe must fulfil requirements which ensure that other important occupational and social aims in Europe are not impeded.

The criterion of international competitiveness

The education of young Europeans must be competitive internationally. This means that an expansion in language education must not take place at the expense of the level of final qualifications obtained or of the natural sciences. Both are crucial in the international education market. Together with comparable numbers of years spent in education, this requirement means that it is no solution to expand language education at the expense of other subjects. Similarly, the suggestion made by Finkenstaedt and Schröder that we should restrict ourselves to 'receptive multilingualism' is equally invalid. They argue that largely passive skills (listening and reading) should be taught in up to five languages (Finkenstaedt, Schröder 1990, p. 37). This suggestion restricts the teaching of competence in English and overlooks the active language skills needed in employment. In the context of competitiveness, the established system of foreign language education does not therefore appear adequate for the teaching of the requisite range of languages since it is associated either with restricted quality of language teaching or with a reduction in the knowledge of other subjects.

The criterion of balancing social differences

Despite numerous initiatives, knowledge of languages varies widely between countries and social groupings. If this inequality of opportunities is not to be exacerbated, language teaching cannot concentrate on higher-level courses, nor does the

solution lie in commercial language courses, supplementary private schools or periods spent abroad, which only certain families can afford. The Erasmus and Socrates programme itself has only reached a small proportion of European students, who have privileged access to opportunities to go abroad. European language teaching should be broad-based and should therefore be provided in general education. It must start early and teach pupils languages before they are split into different types of school. Language education that is truly European will, in the final analysis, not deserve that name if it excludes or disadvantages pupils from language minorities, as has been the case up to now in monolingual schools. Bilingual pupils are the ones who are introducing the languages with which we are concerned into the schools. Minority languages should be taught in schools like any other lest they turn into dialect or remain oral family traditions, which are of no account in employment.

The criterion of intercultural skill

It is not just a matter of subject knowledge or of teaching English and French, but of languages which determine the social, cultural and economic environment. To be more precise, it is a matter of relationships with European neighbours, either as partner countries or as minorities in one's own environment. These relationships call for the capacity for dialogue and intercultural communication in order to see oneself through the mirror of what is alien. Interactive language teaching treads new paths that not only involve subject knowledge but also set up joint learning processes between language groups. Innovation and 'border pedagogy' as ways of coming to terms with frontiers expand people's own points of view (European Commission, 1990, p. 19). Early language teaching methods are encapsulated in the slogan 'Learning your neighbour's language' (Peltz, 1989). They are not restricted to collecting words and practising sentences, but aim at carrying out projects in the neighbouring country together with the pupils at a partner school. The ability to transcend linguistic and cultural boundaries through joint activities is acquired with speakers of the other language. These groups are within reach: they may even live in one's own

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Foreigners in the EU: major groups in millions (as of Dec. 1995)

Turkey	2.8 m
Former Yugoslavia	1.9 m
Italy	1.2 m
Morocco	1.1 m
Portugal	0.9 m
Spain	0.5 m
Greece	0.5 m

are indeed a European invention, were always associated with language learning and are thus in a position, to which no other national institution can aspire, to provide support to young people as they build Europe (Graf, 1995). This task is not possible, however, unless they are open to new languages. Since we are dealing with young people, with their abilities and expectations, I shall introduce my argument with some data for specific populations.

Minorities in the European Union

Overall, 4.8% of the total population of the EU (369 million) are foreigners or EU citizens not living in their home countries: **17 671 500** persons (Ausländer in Deutschland, No 3, 1997, p. 10). This group is larger in number than that of many Member States.

Millions of people in the EU live in a neighbouring country. Many are bilingual and pass on their languages to their children. They tend to live in the major cities and are heavily represented in younger age groups.

'Foreigners' in the Federal Republic of Germany (as of 31.12.1997)

At the end of 1997, 7 365 833 people without German passports were living in Germany. This group can be divided by origin into a smallish number of minorities speaking Turkish, Serbo-Croat, Italian, Greek, Portuguese and Spanish⁷.

To date, the potential language knowledge among these groups has largely lain untouched, present in a basic form but not developed formally. National education systems concentrate on monolingual schools. They offer minorities the alternative of being educated either in the second language or in 'mother tongue' classes, separated from their age group. Failure to develop the language knowledge of bilingual children means an unimaginable waste of the Europeanness which is already present in this school generation⁸. These groups can make their 'own' contributions to the European environment in the national interest of the countries of origin if they are fully educated in both their first and their second language. Their own culture will only be

"Schools as an institution are themselves not a national invention. They are indeed a European invention, were always associated with language learning and are thus in a position, to which no other national institution can aspire, to provide support to young people as they build Europe..."

"Failure to develop the language knowledge of bilingual children means an unimaginable waste of the Europeanness which is already present in this school generation."

6) Why should a young Frenchman from Alsace not start training to work in banking in a city on the other side of the Rhine, where youth unemployment is far lower and the banks need staff who are completely bilingual? Why should a German family not choose a German-Italian primary school for their daughter in which she will, together with children of Italian parentage, learn a language that is spoken in Germany by no fewer than 600 000 people?

7) The Eastern European languages of returning ethnic Germans need also to be taken into account.

city. Learning with them requires time, a place to meet and the practice of joint learning over a period of years. Anyone who has experienced this in school will subsequently react differently to both the foreign 'mentality' and his or her own 'identity'.

This is an urgent task at the present time since the potential of minority languages is available and national schools need to take new cognisance of the need to prepare monolingual pupils for a world of work that is no longer structured nationally⁶. We must therefore show at this juncture how a whole new concept of language teaching, in the form of general education which overcomes both social and national boundaries, can be achieved. This concept will lay the foundations for a broad process of European integration in the next generation. It is up to the State-run schools to bring it about. This can admittedly only be done by groups of schools, in which the different schools set their own language priorities, thereby jointly building up a wide-ranging school landscape that reflects the language landscape of the city in question.

Pupils as human capital

Today's pupils are no longer from one homogeneous majority, but also from minorities or mixed families in which they grow up bilingual. They are at home with not just one language and culture and are thus truly the European citizens of tomorrow. Schools face the task of developing this human capital so that social and linguistic differences are overcome and bilingualism is turned into an employment opportunity. Schools as an institution are themselves not a national invention. They



preserved if it survives contact with the foreign culture and is renewed by it (Karvela, 1993). After a phase of monolingual assimilation, a classic country of immigration such as Australia did not realise the significance of the linguistic diversity of its immigrant groups until the 1980s, but has now started promoting intensive bilingual schooling when this fulfils the criteria of 'social justice' and 'economic relevance'⁹. A new multiplicity of languages is thus being developed in the cities which was unthinkable in the earlier phase of English-language assimilation but which conflicts in no way with the general teaching of English.

Basic concepts of bilingual schools in Europe

The multilingualism in a city can be reflected in its schools if the various schools in a group set different language priorities which accord with their social environments and which each add another partner language to the language plan of the group. This leads through to multilingual school-leaving qualifications, since pupils are taught in primary classes to learn together in two languages (Graf, Tellmann, 1997). Multilingual school education that follows the ideas put forward here is based not on an expansion in the number of languages taught but on bilingual primary education, on which established foreign language teaching can build at secondary level. What is proposed is thus a new type of educational provision for pupils of varying linguistic origins, not language support for specific target groups, which has proved a failure (McLaughlin, McLeod, 1997).

Bilingual schools which see themselves as part of the public school system provide children from language minorities with the opportunity of learning the normal curriculum in two languages alongside children from the majority, with the language of the country in question remaining the main school language. Such schools thus start from the knowledge of the minority children and develop it without removing the children from the normal school or curtailing the subsequent foreign language programme. At the same time, minority families are helped to escape the monolingual dead end of hav-

Citizens of the most important recruitment countries in the Federal Republic (31.12.1997)

Turkey	2 107 426
Yugoslavia (excl. Slovenia, Macedonia)	721 029
Italy	607 868
Greece	363 202
Bosnia-Herzegovina	281 380
Croatia	206 554
Portugal	132 314
Spain	131 636

Source: Ausländer in Deutschland, No 3, 1998, p. 8.

ing their children educated in either the second or the first language. On the other hand, children from the majority are given the opportunity of learning a neighbouring European language as 'native speakers' in contact with fellow pupils. While monolingual education is divisive and language support programmes are exclusive, the bilingual path calls for two language groups to be treated differently and for them to be given the chance to learn languages from one another in natural contact with one another.

Three guidelines for the development of bilingual schools

□ Bilingual schools are part of the public education system: bilingual schools are a regular part of the public education system. They reflect a development in educational policy, opening up schools to Europe. They should remain as much like normal schools as possible. They are schools with the normal curriculum and timetable of the general education system which teach a second language from the first year of schooling alongside the national language. The idea of bilingual schools is not to promote specific groups of pupils in specific languages, but to provide continuous channels of education for pupils in a town or city who are aiming at multilingual school-leaving qualifications.

□ Bilingual schools are for children from a minority and from the majority: bilingual schools take pupils' skills into account, they acknowledge children's knowledge of languages and develop it. It is therefore necessary to recruit pupils from the majority and from a language minority in roughly equal proportions. No

8) The example of the Greek minority in the Federal Republic demonstrates the relevance of this group to future interchange between the two countries within the EU: of around 451 100 Greeks living in the EU in 1997, by far the majority were resident in the Federal Republic (363 202). Both countries must have an equal interest in the multilingual education of children of Greek parentage in the Federal Republic, children who will return home, and children of German or German-Greek families in Greece. These children bring linguistic and intercultural experiences with them which can only be fully developed through school education. If this is successful, these Greek-German citizens will become trustworthy bridges for dialogue and mutual understanding between the two countries; their cultural and economic importance cannot be overestimated.

9) Lecture by M. Clyne on 'Language Change in Australia' at the University of Osnabrück on 4.5.99.



“The new quality of bilingual language learning has been proved through the practical experience of European Schools and similar school projects... The advantages can be summed up as follows:

- Pupils learn European languages not taught through the established foreign language programme (English and French).

- Pupils learn early on to speak and write two languages which they can use at the secondary stage as functional media of instruction.

- Pupils generally learn neighbouring European languages without an accent by starting early and through contact with fellow pupils who are native speakers.

- Pupils are multilingual when they finish school. In addition to their first language, they can use two other languages in employment (second language + English).”

selection criterion should be employed beyond knowledge of one of the two first languages. These schools are neither for gifted children nor costly provision for an elite. Nor are they remedial schools for minorities, but high-quality general schools for children of normal ability being taught in two languages. They thus avoid the mistake made in ‘bilingual programs’ in the USA of setting up special schools for pupils in order to preserve their first languages (Graf, 1997).

□ Bilingual education runs throughout the school career: bilingual schools are not marked by intensive language teaching, but by joint learning in two languages. They therefore need a pedagogical plan which provides for subject learning and language learning to influence each other, coordinates the teaching of reading and writing in both languages, and matches the use of the first and second language in teaching to the pupils’ level of language knowledge. Such a plan covers the entire primary school stage. Parents have the option of choosing it (Ricco, Sandfuchs, 1997).

Bilingual education and multilingualism

Bilingual schools always start two languages early, either in pre-school classes or the first grade. If the first four years of schooling are taught bilingually, the normal foreign language programme can be added subsequently. The two schemes of language teaching complement each other and provide a joint foundation of multilingualism: through bilingual primary education all pupils will learn three languages. Those reaching courses at higher levels will learn 4 or 5 languages, as in the European Schools of the EU.

The new quality of bilingual language learning has been proved through the practical experience of European Schools and similar school projects (Loser, 1992). The advantages can be summed up as follows:

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□ Pupils are multilingual when they finish school. In addition to their first language, they can use two other languages in employment (second language + English).

Bilingual school projects

The ‘Wolfsburg German-Italian Primary School’ (Deutsch-italienische Grundschule / Scuola italo-tedesca) is a State primary school which was founded in 1993 in Wolfsburg. This project demonstrates that the criteria set out above can be realised in a normal school. This school has not only implemented a language teaching plan, but also become a successfully European-oriented school which parents are by now queuing up to join (Ricco, Sandfuchs, 1997; Ricco, 1997; Graf, 1990, pp. 102-115).

Even if new schools are not set up, bilingual education can be brought about by the establishment of bilingual classes in school centres, which gradually form, as they continue, bilingual branches within normal schools. I have put forward the model of ‘European classes’ for this type (Graf, 1996). This approach gives parents and educators a way of introducing bilingual branches into a monolingual school if it is not possible to found a bilingual school.

In Berlin, a European school landscape has been created through the ‘State European Schools of Berlin’ (Staatliche Europa-Schulen Berlin, SESB), founded in 1993, which have been expanding from year to year. They enable Berlin parents to have their children educated alongside native speakers from grade 1 in German and English, German and French, German and Russian, German and Spanish, German and Italian, German and Turkish, or German and Greek. To date, parents of over 1000 children have opted for this model. According to Barbara John, Commissioner for Foreigners’ Affairs in the Berlin Senate, it has become a ‘trade mark’ of Ber-



lin education policy, and it largely coincides with the proposals outlined here (John, 1997).

Multilingualism as a key employment skill

The peculiar significance of a knowledge of languages in working life lies in its specific quality. Languages are learnt 'naturally' in childhood. Foreign languages can be taught competently from grade 1 and used productively throughout life. Furthermore, the learner always regards his or her performance as provisional. No speaker in fact uses the full potential of his or her language. Languages therefore, more than other skills, call for lifelong learning. In addition, foreign languages open up opportunities for encounter with others and exploration of what is alien. A knowledge of languages thus creates skills which considerably enlarge the field of occupational opportunities and permit lifelong mobility and discovery. Given the current changes in the world of work, there are no basic skills that are of comparable fundamental importance throughout working life. Subject knowledge, individual gifts and interests may still be important, but specialist training by itself is no longer a sure way of guaranteeing permanent suitable employment (Grießhaber, 1998). The significance of language skills will increase still further if Fritjof Bergmann's forecast that part-time jobs will predominate in the future, proves true. This will mean that different occupations will have to be pursued simultaneously in very different social contexts (Bergmann, 1999).

Multilingualism is a threefold key skill which, if taught and developed early, can

guarantee successful employment in Europe in the long term.

□ Besides providing subject knowledge, a knowledge of languages also brings communicative social skills, which develop of themselves as languages are actively used. This occurs in contact with people, and foreign languages are used in encounters with people who avoid others because they regard them as alien. The deeper one goes into such exchanges, the more one seeks to find out. J. Vaillant describes the multiple layers of this activity as 'getting to know - understanding - communicating' (connaître - comprendre - communiquer) (Vaillant, 1992).

□ Beyond the social world, languages also open up new opportunities in the information society. Media and international information networks can only be used productively with the appropriate language knowledge. The significance of their potential must increase if young people take advantage of their opportunities in the fields of participation, continuing education and exchange across regional borders (European Commission, 1997, p. 13).

□ A multilingual education includes expanded **intercultural skills** in contact with another language group. At a time when ethnic allegiance is being emphasised, it is vital that large groups of young people from different cultural backgrounds have the opportunity to enter into dialogue and to live together. Those who have learnt as pupils alongside a different language group over a period of years will know how to cope with cultural differences. Only if pupils are given the lasting ability for dialogue today will they have the skill as adults to help to build new bridges of understanding between the languages and cultures of Europe.

"A knowledge of languages... creates skills which considerably enlarge the field of occupational opportunities and permit lifelong mobility and discovery. Given the current changes in the world of work, there are no basic skills that are of comparable fundamental importance throughout working life. Subject knowledge, individual gifts and interests may still be important, but specialist training by itself is no longer a sure way of guaranteeing permanent suitable employment..."

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Training and links between technical schools and industrial assembly plants in northern Mexico

Development of industrial activity in the border region

Since the beginning of the 1970s the cities on Mexico's northern border have undergone a radical transformation rendering the region strategically important for the country's economy (González-Aréchiga and Ramírez, 1990). What during the first half of the century were leisure resorts for visitors from the United States¹, from the 1970s onwards have provided a base for crossborder industrial activity such as the assembly and manufacture of television sets, automobile components, clothing, medical instruments, toys and other goods². By the end of the 1990s a million people were employed in what has become known as the '*industria maquiladora*'³, some 700 000 of them living in settlements close to the frontier (INEGI, 1998). The number of those employed rose by 20% in 1997 and by 10% in 1998.

The transformation was the product of various economic and other factors⁴. The late 1960s brought the expiry of the so-called '*Plan de Braseros*' under which the United States used to accept a certain quota of Mexican farmworkers. Cessation of the arrangement triggered an increase in joblessness in the cities close to the frontier which in 1965 the government sought to palliate with a plan for industrialisation of the border zone. It then made efforts to attract foreign capital into

the zone through legislation granting favourable tariff conditions for foreign goods entering Mexico for processing and subsequent re-export to the United States.

As the inward flow of investment in this type of business expanded, those owning land in the Mexican cities began to offer it for development into industrial estates and to accommodate employment and tax advisory services and the like.

Moderate growth during the 1970s and the first part of the 1980s gave way to a spectacular surge in assembly activity from the mid-1980s onwards. In 1980 the number of those working in the sector was under 120 000; by 1986 the figure had doubled to almost 250 000 and by the late 1990s had topped the million mark. Of this total, more than 200 000 people are located in Ciudad Juárez and around 140 000 in Tijuana - the two cities with the highest number of workers in this sector⁵. The legislative regime and other measures implemented by the Mexican government found an appropriate match in the decentralisation taken in hand firstly by North American and subsequently by Japanese companies which migrated towards the south-west of the United States and the north-west of Mexico (Milkman, 1991). Most firms choosing to decentralise their activities were in the electrical/electronics, car and ready-made clothing industries (INEGI, 1998).

What were the factors persuading the US and later Asian firms to invest in the bor-



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The data, duly interpreted, leads to the conclusion that the two sectors are not estranged or disconnected. Multiple links are forged under labour market pressure. However, the mechanisms are to some extent ambiguous. Being highly dependent on personal contacts they constitute a fragile basis for ensuring continuity of specific links. Even so, social networking may well ensure their permanence.

1) Service activity in the region mainly involved casinos, bars, brothels and restaurants. Now there is a considerable diversity of commercial activity including pharmacies, clothes shops, perfume and cosmetic stores, etc.

2) Although in some studies it has been calculated that the number of Mexican-owned assembly plants in the frontier cities such as Tijuana and Ciudad Juárez is substantial investment of this kind is unimportant in terms of overall employment. Generally these are clothing, furniture factories and others producing traditional types of goods.

3) Originally the word 'maquila' referred to the portion of flour given by peasants to the miller for grinding their corn. But later came to be applied to the type of activities with which we are concerned here and can be compared with those in the Free Zones that in English are referred to as 'assembly plants'.

4) A detailed account of the development process will be found in Fernández Kelly (1983), Carrillo and Hernández (1985) and Hualde (1999).

5) Ciudad Juárez is in the state of Chihuahua and close to El Paso in Texas. Tijuana, which is in the Mexican state of Baja California, is on the frontier with California.



Table 1:
Wages according to occupational category
in Tijuana assembly plants

Tijuana	Average weekly wage including fringe benefits (in Mex, pesos), March 1998.	Multiple of starting wage for an ordinary worker
Plant manager	14 563	32.70
Factory manager	12 226	27.46
Engineering manager	8 731	19.61
Industrial relations manager	8 500	19.09
Information systems manager	8 468	19.02
Production manager	8 444	18.96
Manager responsible for production and materials control	8 115	18.22
Training manager	7 964	17.89
Quality control manager	7 827	17.58
AA engineer	5 157	11.58
ISO 9000 coordinator	3 411	7.66
Personnel supervisor	3 065	6.88
Training supervisor	2 950	6.62
Materials planner	2 680	6.02
Toolmaker	2 450	5.50
C engineer	2 032	4.56
A electromechanical technician	1 682	3.78
A electronics technician	1 628	3.66
Injection moulding mechanic	1 504	3.38
A quality control technician	1 390	3.12
C electronics technician	1 059	2.38
Data typist	835	1.88
A machine operative	821	1.84
A injection mould operative	597	1.34
Fitter with over six months' experience	551	1.24
Experienced fitter	514	1.16
Wages of fitter on starting	445.29	1.00

Source: Ruiz-Morales Asociados, Survey of Tijuana assembly plants (1998)

less in line with Mexico, were \$2, against \$4 for Korea and Taiwan and \$9.30 for the United States (ILO 1997:55).

The advantages, however, did not lie only in the wage costs for workers but also, as the following table based on a survey of somewhat over 100 plants in Tijuana shows, in the salaries paid to administrative and technical staff.

Another important factor, especially so far as Tijuana and Ciudad Juárez are concerned, was the weakness of the trade unions coupled with a workforce with little organisation and no union experience⁸. The border zone has a number of advantages from the geo-economic point of view, being close to the vast US market and consequently on a direct trade route between North and South America.

The border industry has come under criticism from academics, opposition parties in parliament and activist groups in Mexico, Canada and the United States. The main objections have been:

□ Low salaries and poor working conditions, particularly from the point of view of health⁹, and the restrictions on the formation of independent unions.

□ Jobs created are mainly unskilled.

□ The assembly plants make little use of local suppliers.

□ The damage caused to the environment.

We shall not attempt any detailed assessment of these criticisms but merely state that in our view the most important change brought about by the border industry has been to bring in factories competing on the world market, with new types of work organisation and a steadily increasing number of stages of product manufacture. All this means jobs for a growing number of Mexican technicians and engineers who have the chance of becoming plant managers. In all there were 118 000 production technicians in 1998, something over 10% of the total number employed (INEGI, 1998)¹⁰.

General Motors' decision to establish a plant in Ciudad Juárez for the design of

6) The theory carrying greatest weight in explaining these phenomena was that of the New International Division of Labour (Frobel et al., 1984).

7) The figure for manufacturing industry in the United States is actually higher than the figure given here and includes wages for those employed in the service sector, where the rate is frequently lower.

8) Although weak unions might be an attraction for employers, this does not mean that there is no conflict between management and workforce in the border assembly plants (Hualde and Pérez Sáenz, 1994; Quintero, 1998; Cook, 1996)

der zone of Mexico? The first, as has been constantly repeated in the various studies, was the low cost of wages, which has, moreover, decreased further over the past fifteen years because of the successive devaluations of the Mexican peso in the 1980s and 1990s⁶. In 1998 the average hourly wage outside the agricultural sector in the United States was \$12.50, whereas that paid to workers in the border zone assembly plants of Mexico was \$2 an hour (ILO, 1998)⁷. The border zone also came off best in comparisons with the countries of Asia. A 1997 study of assembly plants in Central America calculated that hourly wage costs for Costa Rica, which should be more or



electrical car components is symptomatic of the emergence of a heterogeneous panorama of high-tech firms of complex organisation existing alongside others where manual work in improvised workshops is the rule (Table 2). The more innovative plants tend to be suppliers of the car and electronics industries¹¹.

Investigating links: Unknown factors and research methods

This varied panorama incorporates a large number of unknown factors as regards the training given to employees in the various categories. To clarify the situation one needs to ascertain the relationship and links between the establishments concerned particularly with training technical personnel and the assembly plants. Among the questions requiring an answer are:

Is there a close link between the border industry and the technical schools in the area, reflecting a major breakthrough in industrialisation? Or to put it another way, are the firms led by the nature of their operations to develop links with the technical training centres that are quantitatively and qualitatively different¹²?

And regardless of the answer:

How is the link achieved and what form does it take? Is it mainly formal? Who takes the initiative in establishing such a link, the schools or the firms? Is there intensive, regular and wide-ranging collaboration between the two or are we merely faced with early, experimental initiatives?

A second set of questions stems from the creation of new types of training courses and adjustments being made to the curricula and is concerned with whether the curricular changes proposed by the training centres bring them into line with actual day-to-day tasks at the workplace.

Thirdly we need to enquire into the career routes graduates take and their resulting occupational identities. Are they marked by consistent progress with recognition within the firm and in their so-

Table2:

Production systems in border assembly plants

- 1) **Intensive working.** This applies in plants where manual work predominates with long working days and little organisation. May be considered proto-Taylorist (Novick, awaiting publication).
- 2) **Rationalised working.** Introduction of automation; incorporation of factory-type operations; rationalisation of work and just-in-time production, team working, human resource management methods. Combination of flexible working and series production.
- 3) **Predominance of professional skills.** Predominance of engineers, design operations, computer-assisted design.

Source: Carrillo y Hualde, 1997, Hualde, 1997

cial environment? Or are they discontinuous and uncertain, offering little in the way of future prospects?

The subject is relevant for two main reasons:

- The rapid growth in the number employed in the border industry, the size of plants and their increasing organisational complexity.
- The importance given by the Mexican government to policies linking the education sector and industry in the late 1980s and early 1990s (Casas and Luna (coordinators), 1997).

Research conducted in Tijuana and Ciudad Juárez, the two strongholds of the border industry, focused on three main groups of subjects - the training centres, the assembly plants, and graduates of the training centres employed in the plants. On the basis of their interaction we shall look at a) the societal aspect in the specific context of each city, b) the relationship between changes in training courses and curricula and the tasks and occupational categories as they currently exist in the assembly plants, and c) the graduates' occupational identities.

We considered it appropriate for this study to utilise a method of triangulation combining various theories and investigative techniques (Jick, 1979; Bericat, 1998;

9) A recent summary of aspects of industrial health and safety will be found in Kouros (1998).

10) The classification is somewhat imprecise since the figure includes technical and engineering workers who cannot be considered administrators in the sense of general managers and planners.

11) In Tijuana some 35% of plants are in the electronics sector, which in Ciudad Juárez employes 58% of the local workforce (Alba, 1998: 236).

12) For further information on this subject with reference to Mexico and Latin America see De Ibarrola (1993), De Ibarrola and Gallart (1994), Gallart (1992) and Gallart (1995).



13) In our case using different sources of information and methods makes it possible to arrive at more precise conclusions for two main reasons. The first is that some survey data can only be understood on the basis of interviews, particularly in the education sector where the creation of links does not necessarily imply their functioning in practice. Secondly the impossibility of conducting studies that were statistically representative led us to adopt qualitative methods. Finally the subject of occupational identities calls for both a qualitative and a quantitative perspective.

14) The baccalaureate colleges do not award formal qualifications. They are simply schools at which students can study for the baccalaureate with optional technical subjects

15) The results of the first survey are contained in a report sent to the Latin American Education and Work Network in July 1993 and those of the second in a report forwarded to the National Council for Science and Technology in October 1994, and also in Hualde (1999).

16) Because of the wider scope of the second survey and the biases inherent in the first we shall use the result of the second for statistical purposes. The survey carried out in the plants cannot be considered representative since at that time the number of such plants in Tijuana was in the region of 600 and in Ciudad Juárez over 300. However, we consider it important to point out that the total number of people employed in the factories we surveyed was 30 287, representing about 15% of the total workforce in the sector in 1994.

17) The 'succession of positions' relates the posts held in succession by a person with the situations that determine his social status. This sociological focus give precedence to analysing the positions insofar as they reveal the functioning of the institutional systems. See Coutrot and Dubar (1992).

Bryman 1987; Bryman and Burgess, 1994)¹³.

The research comprised:

□ Two surveys of the educational and technical training centres in the two cities. Interviews were conducted with all the public teaching establishments in 1992 and key aspects were updated in 1996. The centres covered were at three levels: a) technical training centres (CECATIS) that provide training courses of up to 400 hours in traditional trades such as electrician or carpenter, as well as in basic computer operation, electronics and other less traditional occupations, and b) middle- and higher-level training centres (CONALEP) that run courses of six semesters leading to a middle-level technician qualification, to qualify for which students must have completed their secondary education. Some of these centres are called technical baccalaureate centres (CEBATYS) or baccalaureate colleges (COBACH)¹⁴, and c) centres of higher education such as universities and technical colleges that award degrees in engineering and the like.

□ Two surveys were carried out in the industrial sector, in 1993 and 1994¹⁵. The questionnaires used in each case were very similar. The first survey involved interviews with human resource managers in 18 plants in Tijuana and 13 in Ciudad Juárez with which the training centres claimed to have links. In the first semester of 1994 a second survey was conducted covering 51 plants and involving interviews with human resource managers in the electronics branch, 20 of them in Tijuana and 31 in Ciudad Juárez¹⁶.

□ Thirdly two surveys of graduates were carried out in order to ascertain their training and career routes. Each survey covered 100 engineers and 100 technicians in each city. The questionnaire was designed to identify various events in the course of their working career with the emphasis on the biographical link between education/training and a person's working career. Some authors refer in this connection to a 'succession of positions' to distinguish it from other possible subjects for analysis such as a biographical narrative or a succession of events in a 'life cycle'¹⁷.

□ Participative research involved attending meetings of the Tijuana Liaison Committee over a period of two years. This was the only body that brought together the majority of training bodies mentioned and representatives of industry.

□ Semi-structured interviews were conducted with 51 engineers and 15 technicians in two stages.

The societal aspect of linkage

The societal analysis had a twofold objective, namely to quantify the interaction between training centres and firms in order to discover which organisations intervene most decisively and which play little or no part. This enabled us to estimate the degree of *integration* in the two cities being considered. Secondly a series of qualitative criteria allowed us to make an initial estimate of the degree of *consolidation* and *scope* of the link. By scope we understand coverage in the sense of courses, practical work, research, etc. The term consolidation is used to signify the degree of continuity observed and the factors contributing to its enhancement, interruption or alteration.

Links by agreement

Of the training centres covered in the survey of training centres 76.9% claimed that some form of interchange took place between them and the assembly plants. Most of these links were created during the 1980s (see Tables 3 and 4) and were thus of a fairly recent nature and limited as regards maturity and consolidation.

However, in addition to the temporal aspect, one must also take into account the diversification of the centres' links with the industrial firms. The 1996 data shows a large number of agreements as existing, with some centres having signed as many as 30. While this suggests very wide-ranging links on the part of the training centres, it does not necessarily mean that they cover the whole of manufacturing industry, as Tijuana has around 600 assembly plants and Ciudad Juárez around 250. The survey of firms showed that those plants entering into agreements did so with two or three training centres. Oth-



erwise it would not be possible to explain how in a survey of 200 assembly plants conducted by the Tijuana Liaison Committee 80% claimed to have no contact with local training centres and to have no knowledge of the courses they provided. In our own survey of assembly plants in the electronics field more than half were unaware of the training courses offered by local centres.

It would therefore seem that Tijuana has a small nucleus of plants that maintain definite links with the education and training system. These are generally larger firms with a more complex organisation that employ a substantial number of technical staff. In the case of Ciudad Juárez the links were more extensive as most of the firms there are larger.

Not all agreements actually function in practice, although the fact that they have been signed is in itself proof of strengthening links between most centres and some segment of the border industry.

It should also be pointed out that most agreements aim to secure benefits for students in the form of work experience opportunities, and that this, while important, is somewhat limited. Aspects such as research and development or technological project work, for example, are not mentioned.

Finally the agreements change when the technicians and engineers employed in the factories move to another job, especially if they are also instructors. Although it is impossible to gain any statistical idea of the frequency with which this occurs, it was clear from the interviews that the link is very reliant on personal contacts.

The agreements constitute definite evidence of links existing between the two sectors, as does the proportion of graduates who find employment in the assembly plants. This is not attributable so much to their efficient operation or to other mechanisms such as the employment exchanges run by 22 of the 39 centres as to the increased number of jobs available.

Links and the labour market

The survey shows that generally speaking the assembly plants are an impor-

Table 3
Tijuana training establishments and their links

Establishment	Created in	Registered students	New courses	Agreements
CONALEP Tijuana I	1980	920	1 Productivity	25
			2 Tax accountancy	
			3 Electrician	
			4 Industrial electronics	
			5 Maintenance of micro-computers	
			6 Automotive engineer	
CONALEP Tijuana II	1982	916	1 IT	22
			2 Foreign sales	
COBACH Tijuana	1981	2800	1 General administrative assistant	36
			2 General control assistant	
			3 Industrial quality assistant	
			4 Information technology assistant	
COBACH Plantel la Mesa	1983	1400	1 General administrative assistant	36
			2 General control assistant	
			3 Industrial quality assistant	
			4 Information technology assistant	
CBTIS 155	1982	1911	1 Accounting technician	2
			2 Office computer systems	
			3 Design of moulds for plastics materials	
CBTIS 116	1978	1134	1 Electrical/mechanical	
			2 Construction	
			3 Tax computer operator	
			4 Production	
CETYS University CETYS CECATI # 6	1990		1 Computer technician	
UABC	1961		1 Degree in office computer systems	
			2 Degree in communications	
			3 Computer engineer	
			4 Degree in international business	
			5 Electronics engineer	
CECATI # 144	1988		1 Computer technician	
			2 Tourist service technician	
			3 Electrical technician	
UNIV. IBEROAMERICANA			1 Accounting	
			2 Degree in administration	
			3 Nursing	

Source: Hualde Alfredo (1996), Survey of the education sector in Tijuana and Ciudad Juárez



Table 4
Ciudad Juárez training establishments and their links

Establishment	Created in	Registered students (1996-1997)	New courses since 1990	Agreements
Cecatis 121	1986	783	Microcomputers and electricity - Work scholarships - Visits - Stays - Exchange of information - Donations	6
Cecatis 87	1983	1525 (1995-1996)	- Industrial maintenance	13 (1995-1996)
Technological college	1964	5958	- Industrial engineer (1991) - Electrical engineer (1991) - Mechanical engineer (1991) - Admin. degree (1993) - Specialist environment engineer - Doct. Industrial engineering (1995) - Admin.	33 30 with firms Practical work 3 with employer organisations Advice and training
ITESM (Monterrey Technological College)	1983	1098	- Degree in international business - IS engineer	15
Conalep I	1980	823	- Manufacture of articles of plastics materials	6
Conalep II	1985	968	- Technical professional (hotel) - Technical professional (nursing)	11 Practical work
Cetis 61	1980	800	- Baccalaureate in office computer systems - Computer maintenance technician	6 Practical work
Cebatis 128	1979	1900	- Programming technician	
Cebetis 114	1978	1079	- Programming - Automative electronics	

Source: idem

tant source of employment for those graduating from the training centres covered. Only graduates from five plants had not found jobs in the assembly plants in the year preceding the survey. At the other end of the scale in ten of the centres the percentage of graduates employed in assembly plants varied between 58% and 95%. Graduates from the

middle- and higher-level training centres and from the technical training centres (CECATIS) represent the highest proportion of the student body finding employment in the assembly plants. Here links with the labour market are formed before students finish their course, as a large number of them combine study with work.



Table 5
Assembly plants and graduates of local training centres

	Technical secondary schools	CETYS	CECATYS	CBTYS	Public technological colleges	CONALEP	Private technological colleges
Tijuana % of plants with graduates	30	10	25	15	7	55.0	5.0
Ciudad Juárez	59.4	40.6	43.8	40.6	100	62.5	62.5

Source: Hualde, Alfredo: Survey of managers in border assembly plants, 1994

The survey of assembly plants produced various items of data that confirm the importance of the link with the labour market:

A high percentage of plants employ students from certain training centres such as the public technological colleges and the public universities. In Ciudad Juárez all the plants covered by the survey have among their personnel people who have graduated from the public technological colleges and 93.8% graduates emanating from the public universities.

A second fact that emerges is that the plants in Ciudad Juárez employ more graduates than do those in Tijuana, probably owing to their size. This is true for graduates of secondary school courses runs by the public CETYS, of graduates of the CECATYS, the CBTYS, public technological colleges and, though less clearly, of graduates of the CONALEP. The greatest difference is between the private technical institutes, where the figure is 62.5% for the plants in Ciudad Juárez against 5% for those in Tijuana (see Table 5).

Another interesting piece of information emerging was that the number of graduates of public training centres outstripped that of private centres, although in Ciudad Juárez one finds a substantial number of graduates from private technical institutes.

Taking the average figures for two cities at four levels of linkage we find:

□ At the highest level where more than 70% of plants claim to have graduates from one training body there is mention only of the public technological colleges and universities.

□ At the second-highest level between 50% and 70% recruit from the middle- and higher-level technical colleges (CONALEP), which train technicians.

□ Between 30% and 50% of plants recruit from the CECATYS (36.5%), the CBTYS (30.8%) and the private technical colleges (40.4%).

□ At the lowest level are the private technical colleges (25%) and the private universities (26.9%).

The figures above indicate a decreasing degree of linkage from the high-level institutions downwards to the technical training centres, with the middle- and higher-level training institutions in the middle. A second vector, again in decreasing order, would seem to be from the public to the private centres. How can this information be reconciled with the training centres' claim that middle- and higher-level centres such as CONALEP furnish the largest proportion of assembly plant employees? A possible explanation is that the graduates of universities offering a wide variety of courses also offer graduates a wider range of jobs outlets. A second possibility is that the technicians start work in the assembly plants but, as we discovered in the course of our inter-



views, do not remain there. Finally the discrepancies between what the centres claim and what can be concluded from the survey of plants may be due to the nature of the plant sample which, as pointed out, was not representative.

Teachers as agents of linkage

Teachers are an important means of linkage because they are employed in both education and industry. A third of training centres reported that in 1992 20% or more of their instructors were also working in assembly plants. In seven centres the figure was more than half.

Linkage through instructors is, paradoxically, also expressed in the attrition of teaching personnel in the technical education centres. In 11 centres out of the 33 which maintain links with the border industry the attrition rate for teaching personnel was in excess of 10% in 1992 and in seven of the 11 cases was over 20%. The attrition is primarily attributable to the higher salaries obtainable in industry, whether in the assembly plants or elsewhere; another major factor is that instructors seek to set up on their own account¹⁸.

However, working in both industry and the education system simultaneously is not incompatible and many teachers seek to boost their income by doing so.

The headhunting practised among teaching staff, particularly in the higher-level institutions, makes it difficult to maintain a teaching body of high quality. Even so, teachers who also work in the border industry are the main channel for communicating plants' needs at middle and professional level. The important role they play in this regard is reflected in the hiring of qualified personnel.

'I regard the person I first began to work with as a friend. He is an engineering instructor; we met because he gave a course in industrial electronics. He once said to me 'You are the only person who ever got 10 out of 10 in a course of mine'. A year later I rang him and he said 'Come over, we've got work for you. You can take on all the projects I haven't been able to do myself because I was tied up with other responsibilities.' (Engineer aged 25).

Thus besides teaching at a training centre, instructors seek out from among the students they know those best suited to work in industry. This creates a network of friends and acquaintances linked by a common interest in work.

These same instructors help the education centres by providing courses which employers need. However, in the border zone the courses are another form of linkage that is relatively fragile by virtue of being closely bound up with the specific needs of employers at a given time. Moreover, larger plants have their own in-company training schemes to inculcate quality standards and organisational procedures. In matters connected with machinery and equipment they frequently have recourse to their own salesmen as trainers. This puts the training centres at a disadvantage compared with situations in which training centres make good many of the shortcomings in terms of training and skills in an agglomeration of small and medium-sized firms¹⁹.

Liaison committees

Regular attendance at the meetings of the Tijuana Liaison Committee, which was dismantled in 1995, provided a means of assessing the possibilities for action open to a type of municipal organisation that was created in a number of Mexican cities as the result of an initiative on the part of the Secretariat for Public Education²⁰.

The Tijuana Liaison Committee included representatives of all employers' associations and educational bodies in the city.

During its lifetime the Committee was confronted with three basic problems:

- A certain lack of initiatives with regard to linkage.
- A lack of the funds needed to pursue a suitable strategy.
- A lack of real commitment on the part of some institutions.

The lack of initiatives refers not just to a lack of proposals as to how to improve liaison, but also to the lack of dynamism in the committee's operation and to the

18) The persistence of attrition in 1996 was confirmed in interviews conducted at the centres.

19) This has recently been the case in local systems such as the toy industry in Ibi (Alicante) where we conducted interviews with people responsible for relations with firms.

20) The disappearance of this committee does not mean that municipal liaison organisations no longer exist. In 1998 a smaller body, promoted by an employers' association, was operating in Tijuana and seeking contacts solely with institutes of higher education. This organisation was aiming to identify the need for skilled workers in the city of Tijuana but had no backing from the Secretariat for Public Education.



representative nature of its members. Education sector committee members invariably stressed that they were present as representatives and delegates of the centres concerned and that their ability to take initiatives and decisions was limited. The employers' representatives, on the other hand, were few and seemed to be waiting for the education authorities to take the initiative.

The lack of a definite budget hampered the Committee's activities and it was forced to rely on the good will of its members and their economic interest. The main activities undertaken were:

- ❑ Centralising information concerning training courses available in the city by publishing a catalogue.
- ❑ Coordinating dissemination of information by the technical training centres.
- ❑ Organising an Education and Employment Fair with the involvement of educational bodies and some local industrial firms.
- ❑ Encouraging personal contacts and some interaction between various sectors.
- ❑ Negotiating with the federal authorities for funds with which to improve the infrastructure in the training centres where this was most needed.

Similarly the Human Resources Subcommittee conducted an industrial survey which yielded little that was new apart from manufacturing firms' ignorance concerning activities in the training field.

Finally it was typical that the Committee ceased operations with the structure described in 1995 with no public explanation as to the reason. Some members consider that it was due to the lack of federal government support for its activities on the scale of previous years. In our view it reflects the lack of continuity in support for certain bodies at federal level as a result of changes in the political climate that almost always went hand in hand with economic crises.

In Ciudad Juárez the Committee formally adopted a series of objectives, among

them 'Carrying out studies of the need to train personnel for industry and the service sector in the zone of influence of Ciudad Juárez'. A second objective was 'To assess existing plans, programmes and training courses and make proposals regarding necessary changes to be made by the academic councils of the institutions concerned.' These studies were used as a basis for updating curricula for a number of occupational courses.

In addition the Committee, in collaboration with the Border Industry Association, conducted a survey of 92 firms with a total workforce of 75 000. This enquired into the possible skilling needs in fields ranging from mechanical engineering and machine tools to electronics (automatic insertion), statistical quality control, human relations, reading technical drawings and Spanish.

As one representative of the committee put it in his answer to the questionnaire, despite the greater consistency of its activities the Ciudad Juárez committee's existence, again, 'was affected by changes of government. The changes in those responsible at central government level meant a loss of follow-up and re-activation of the committees'. He summarised the principal difficulties as follows:

- ❑ The lack of consistency in following up such programmes at central government level.
- ❑ The fact that participation of the various bodies represented on these committees was governed more by political than entrepreneurial considerations.
- ❑ The need for a change in attitude at the various levels within a company where training is still regarded as a cost rather than an investment.

The situation of the committees in the two cities was therefore different. The Tijuana committee did not take any effective action to identify industry's needs in terms of skills or to analyse curricula. In Ciudad Juárez one sector of industry and the educational bodies instituted a number of reforms based on the committee's proposals.



Liaison at work: From curriculum to occupational tasks

Creation of new occupational training courses while abolishing others, and modifying existing curricula has been the constant concern of educational bodies with a view to achieving closer links with industry. Despite the different opinions and attitudes encountered, training courses as they at present exist in the border zone generally speaking match the specialist occupations in the assembly plants. The training centres have been speedy in creating new courses and making the necessary adjustments to those already available.

It is worthwhile examining in outline the training courses created since 1990. They may be classified as follows:

- A series of special courses in the field of electricity related to the many plants in this branch in Tijuana especially.
- Special courses concerned with both the production of plastics materials (Ciudad Juárez) and mould design (Tijuana). This takes into account companies which use plastics materials both for manufacturing toys and medical instruments and those producing car components.
- Special courses in information technology and computer science at various levels and with differing emphases: IT assistant, IT technician, computer operator, computer engineer, tax computer operator. The proliferation of courses of this type reflects not only the spreading use of computers in industry but throughout the economy in general.
- Special courses of a conventional nature such as mechanical engineering and electricity at various levels.
- Special courses directly related to production, ranging from quality assistants to production technician and production engineer.
- Courses in accounting and office management.
- Special courses in the maintenance of equipment.

□ Special courses in environmental engineering at the Ciudad Juárez Technological Institute.

To a large extent the revision of the occupational training courses shows which types of industry have developed in the two cities. There are still no courses available leading to a qualification in industrial design or as a quality control engineer but generally speaking the ability displayed by the training centres in adapting their courses has been remarkable.

Even so, there is still no single or dominant logic underlying the creation of training courses since the way in which they and the curricula have been modified varies. The creation or cessation of courses is influenced by actual demand, the information provided by firms, and a clear tendency to initiate courses in the field of electronics. Other influencing factors are general educational reforms such as that which led to a reduction in courses for engineers from 55 to 19 in 1993. Moreover, there are other decisions and procedures that are far less reliable, such as conducting surveys of students or the fact that a centre's teaching staff was better equipped to provide one course rather than another.

The diversity of factors contributing to the creation of courses is also noticeable when it comes to adapting curricula. Here what is most striking is the constant concern to include practical content. This is consistent with the greater importance being attributed to extending work experience or periods of practical work to an ever-growing number of students²¹. Even so it is typical that instructors, and graduates especially, still continue to view the acquisition of knowledge as a sequential process, with theory learned at school and applied in practice at the workplace.

Career routes and identities

The link between the education system and industry is related in a complex manner to the career routes taken by graduates in local labour markets. The two systems interact to provide graduates with a series of job opportunities while at the

21) There is some evidence that older interviewees had not been allocated periods of practical training.



same time setting a series of conditions and limits. However, the limits and opportunities are modified by the individual and collective strategies of the graduates themselves, who from this point of view are equipped with specific resources and abilities.

The relationship between career routes and the interaction of the two systems may be approached in two ways:

□ The pursuit of certain routes by graduates has a bearing on the opinion employers form of the centres and their output. We might say that it influences employers at the *reflexive level* because their experience with graduates determines whether they will strengthen or weaken their links with certain training centres and take on more or fewer of their graduates or those of a different type.

□ A second influencing factor is more direct. Where trainees emanating from certain training centres are successful in gaining higher positions of power and decision-making in industry, the linkage possibilities increase. In this sense the graduates play an active role in that they become part of the productive system. This type of relationship is likely to be clearer in the case of institutions of higher education, more of whose graduates reach the positions mentioned. However, there are also ways of influencing decisions from an intermediate level where one can mobilise personal knowledge in order to strengthen the link.

Occupational career routes of technicians and engineers are in general characterised as follows:

□ Access to employment is achieved while still in training. There is no theoretical study/work sequence as in other cases. Only in three of the training centres covered by the survey were students solely occupied in theoretical study. In 22 of the training centres 40% or more of students combined study with work. In seven of them the figure was 70% or more. The occupational category attained while still studying is lower than that subsequently accredited on completion of the training course. Technicians may perform the jobs of manual workers while future engineers normally do the job of a technician.

□ A substantial proportion gain practical work experience in the assembly plants. Our survey showed that 80% of graduates had completed a period of practical training. The survey of plants also confirmed that practical work is becoming increasingly generalised. Only six factories of the 52 covered did not accept students for practical training²².

Engineers and technicians follow different routes. It is very difficult to find technicians over 30 years of age with five or more years of work experience. This is due to a number of factors:

□ Many technicians who follow a technical course do not enter the labour market because they decide to do something else or go on studying. Women may opt to become housewives.

□ Some find jobs in sectors unrelated to their course of study.

The figures confirm these statements. Of the engineers interviewed in Tijuana more than a quarter had been in their current job for between two and five years and a somewhat smaller proportion for less than 5 years. In Ciudad Juárez 36% of those interviewed had been in their current job for more than five years and 30% for between two and five years. The job stability encountered is underscored by cases of individual graduates who have worked in the same plant for as long as 10, 12 and even 20 years.

The technician sample interestingly reveals a relatively high degree of stability in the first job. The average for both cities is over two years. It is difficult to talk of career routes on the basis of the survey, however, because in Tijuana almost half those interviewed had only worked in the field for which they had been trained and 21.4% had had two jobs. In a few cases subjects reported having had five or even six jobs. The first difficulty when talking of careers and occupational identities, therefore, is the lack of work experience.

The case of Ciudad Juárez is indicative of the different age structure and, perhaps, of two different levels. One of these, encompassing some 70% of technicians, did not report having had more than three

22) Links formed as a result of practical training are generally with public training establishments. Less than half the assembly plants covered by the survey accept trainees from private centres, whereas 60% take students for practical training from Conalep and the public universities. More than half take students from CECATIS, CEBETIS and the public technological colleges.



jobs while 30% had had more than three and the remainder as many as 10. The marked mobility in the latter case is comparable with that of machine operatives in the assembly plants.

From what can be deduced from the survey and interviews, the career patterns and the technicians' perception of their occupational identity varies considerably. An extreme case would be that of a woman who left her job as a technician in an assembly plant as soon as she could for an office job with the social security authorities. Here her training was only useful to her to help her escape from the assembly line. Some technicians, on the other hand, especially mechanics and to a lesser degree electronic technicians, consider themselves to be doing the work of an engineer and earn wages which are sometimes higher than those of young engineers starting out on their career.

The tasks of engineers and technicians

Our field work showed the professional activity of engineers to be distinguished by the variety of tasks involved. In the case of industrial engineers diversity of content is assumed to be a central feature of their course and in their subsequent work their versatility is regarded as a quality enabling them to perform a variety of tasks in different job categories. However, it is not only the breadth of the curriculum that makes this versatility possible but the variety of jobs that firms have to offer. Two other decisive factors deriving from the development of the border industry in recent years are the considerable organisational complexity of plants and the management of the human resources, who in this case are highly skilled. In this sense there is practically no horizontal segmentation of industrial engineers as defined by Sengenberger (1988). Another important factor is graduates' own strategies for building up their knowledge in the course of their career. Educational certificates lead to a fairly wide range of functions and categories which are governed by the needs, orientation and characteristics of plants²³.

The same cannot be said of technicians. The tasks they perform are closely related to the special field for which they were

trained so that they are not required to be so versatile. However, there are two related aspects which may be mentioned in order to understand the type of tasks performed by someone with a technician qualification. Firstly technician posts are sometimes occupied by workers who have received further training within the firm, by those who have acquired their skills on the job, and by those failing to complete an engineering course, as well as by technicians who have graduated from middle- and higher-level training centres. Secondly, the kind of work they do and their status within the firm are viewed very differently by themselves and by the engineers. Management and engineers sometimes consider them as skilled workers. The technicians, on the other hand, see themselves differently: Some consider that they do work actually that of an engineer whilst others consider that the greatest benefit of their training has been to allow them to escape work on the assembly line.

These different and even contradictory views of the work done by technicians are the product of different experience, which is expressed in an organisational and administrative form of work management, although for reasons different from those explaining what happens with engineers (Maurice et al., 1987). Neither personnel policies nor work organisation make clear provision for technicians, with the result that there is no segment of the labour market specifically for technical personnel. The door to the technician category is open to people with different educational credentials, so that any vertical segmentation vis-a-vis certain skilled workers or those who have acquired their skills on the job is almost non-existent. There is no labour market category based on educational qualification. At the same time there is a phenomenon which Abbott (1988) refers to as *workforce assimilation*, that is the performance of tasks relative to a given occupation such as that of an engineer by a different group, the technicians, who acquire professional skills and knowledge through their practical work without receiving effective recognition from either the engineers or the firm itself. The phenomenon manifests itself whenever a technician's tasks are not defined clearly and precisely in organisational and social terms.

23) Versatility may also be a requirement in very simple plants where organisation of production, administration, relations with the parent company etc. are all in the hands of one or two engineers.



Different types of links? Limited professionalisation and growing polarisation

The data concerning the reality of links in Tijuana and Ciudad Juárez, duly interpreted, leads to the conclusion that the two sectors are not estranged or disconnected. Multiple links are forged under labour market pressure. However, the mechanisms are to some extent ambiguous. Being highly dependent on personal contacts they constitute a fragile basis for ensuring continuity of specific links. Even so, social networking may well ensure that the links are maintained.

The content of links is restricted to periods of practical training with no clear follow-up at either training centres or plant level. However, trainees get to know the labour market while they are working.

Certain mechanisms devised by the Secretariat for Public Education lack a sufficient degree of continuity because they are subject to the vagaries of policy at both local and federal level.

In practice linkage results in two models: one which aims to professionalise a segment of middle- and higher-level managers made up of graduate engineers, and a second far more diffuse one in which links are subject to the initiative of students,

the policy of the firm concerned and the various resources of the training centres. This model of identities that tend to be somewhat discontinuous is that of the technicians. If to these we add that manual workers possess practically no technical training (Hualde, 1994), the general picture is of a polarised sector of industry that only professionalises the professionals²⁴

Although it is true that some workers are given in-company training up to technician level, the evidence, even that obtained in interviews with engineers, precludes talking of a clear occupational career for the workforce. In the case of technicians an analysis of routes and identities shows that for them the clearest method of making progress is to cease being technicians and to become engineers. Only engineers have the opportunity to enhance their knowledge and receive recognition in salary terms over a period of eight or ten years, followed by reclassification into a category whose summit is management.

This overall picture shows that the border industry is tending rather towards a polarisation of its workforce in which some - though not all - engineers acquire growing knowledge and recognition from their employers on the basis of continuing employment in the sector and in the firm, generosity in working long hours, switching posts and a willingness to travel in order to gain qualifications.

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24) For polarisation see Lope Peña (1997).



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Europe International

Information, comparative studies

Finanzierung der Berufsbildung in Deutschland: Finanzierungsporträt.

HUMMELSHEIM S;TIMMERMANN D; WESTPHALEN S A (ed.)
European Centre for the Development of Vocational Training, CEDEFOP
Universität Bielefeld - Fakultät für Pädagogik
Luxembourg: EUR-OP, 1999,103 p.
(Panorama, 94)
ISBN: 92-828-6928-8, de
From EU national sales offices -
<http://eur-op.eu.int/en/general/s-ad.htm>
Cat.n°.: HX-22-99-046-DE-C
DE

At the end of 1997, CEDEFOP launched a project to produce financing portraits of the VET systems within the individual Member States of the European Union. The financial portrait of Germany combines a qualitative description of the flow of funding through the VET structures, identifying the funding sources and allocation mechanisms, with quantitative data on expenditure for different training types. The report is structured around initial vocational training, continuing vocational training, training for the unemployed and combined forms of training.

Decent work: International Labour Conference, 87th session 1999: Report of the Director-General.

International Labour Office, ILO
Geneva: ILO, 1999,79 p.
ISSN: 0074-6681
ISBN: 92-2-110804-X
EN

This report proposes a primary goal for the ILO in this period of global transition - securing decent work for women and men everywhere. It is the most widespread need, shared by people, families and communities in every society, and at all levels of development. Decent work is a global demand today, confronting political and business leadership world-wide.

Much of our common future depends on how we meet this challenge.
<http://www.ilo.org/public/english/10ilc/ilc87/rep-i.htm>

Vocational education and training in Europe on the threshold of the 21st century: final version.

International Project on Technical and Vocational Education, UNEVOC
United Nations Educational, Scientific and Cultural Organisation, UNESCO
Berlin: UNESCO, 1999,113 p.
(Document No ED/IUG/018)
UNESCO - UNEVOC,
Fehrbelliner Platz 3,
D-10707 Berlin,
e-mail: info@unevoc.de
EN

In September 1998, this UNESCOOEEK Symposium was held in an effort to provide an European perspective on the emerging challenges to technical and vocational education in the early 21st century. Through this report, the contributions are made available to a larger community: VET and new technologies; environmental education and training; the changing role of the public and private sectors in VET, internationalisation of economic activities and tourism, non-commercial exchanges and vocational training.
<http://www.unevoc.de/publicat/pdf/iug018e.pdf>

Innovating schools.

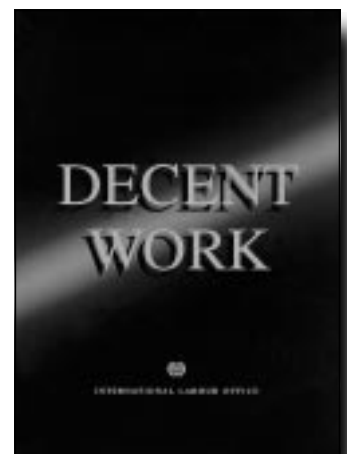
Organisation for Economic Cooperation and Development - Centre for Education Research and Innovation
OECD, CERI
Paris: OECD, 1999,135 p.
(Schooling for tomorrow)
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OECD, 2 rue André-Pascal,
F-75775 Paris Cedex 16,
oecd@oecd.org
EN FR

It is now widely agreed that learning is pivotal in the 'knowledge societies' of

Reading selection

This section has been prepared by
Anne Waniart,
and the Documentation Service with the help of members of the national documentation network

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.





today and, still more, of tomorrow. It is also widely agreed that schools have a key role to play in laying the foundations for lifelong learning for all of us. But, how well are these aims being met? How innovative are schools as institutions? And what are some of the most promising examples across OECD countries from which we can learn? This volume addresses these questions, drawing on a major OECD/Japan conference which was held in Hiroshima and attended by experts from 24 countries and a 'virtual' conference conducted in parallel. It presents key trends and policy challenges regarding schools for today and tomorrow, from European traditions across to the different perspectives of the Asia-Pacific region, with a particular focus on Japan. Alongside expert chapters are the innovative schools themselves, with examples taken and synthesised from many of the countries that attended the Hiroshima conference. The volume addresses issues of curriculum, innovation and the achievement of lifelong learning in the schools of tomorrow.

initiatives that are making the difference in six countries: Belgium (Flemish Community), Mexico, the Netherlands, Norway, Portugal, the United Kingdom (England). How well do these initiatives meet the learning needs of adults at risk of exclusion? How are they organised and what are their innovative features? These are the key questions answered, taking into account not only the point of view of the analysts, organisers and administrators, but also that of the adult learners themselves.

Fields of Training: manual.

ANDERSSON R; OLSSON A-K
European Centre for the Development of Vocational Training, CEDEFOP
Statistical Office of the European Communities, EUROSTAT
Luxembourg: EUR-OP, 1999, 45 p.
(Panorama, 92)
ISBN: 92-828-6345-X, en
From EU national sales offices
<http://eur-op.eu.int/en/general/s-ad.htm>
Cat.n°.: HX-21-99-141-EN-C
EN FR DE

At a time when particular importance is attributed to the adequate preparation of people for working life, comprehensive, detailed and comparable information on participation in vocational education and training is a prerequisite for policy makers in order to successfully develop, monitor and evaluate training policies. This is true for the whole range of vocational education and training, from initial vocational training for young people to continuing vocational training for those in employment. While various data collections have been in place to improve this information base, one aspect of training has been systematically ignored in the past: the information on the subjects learnt. This neglect originated from a simple, but fundamental fact - the lack of an internationally comparable classification on which to found any data collection. A sub-classification to the ISCED classification by field of education has been created with the double objective of providing more detail and precision, while simultaneously maintaining the logic and structure of ISCED. The new classification concerns 'fields of vocational education and training'. It is a second and crucial step to ensure the consistent applica-



Overcoming exclusion through adult learning.

Organisation for Economic Cooperation and Development - Centre for Education Research and Innovation
OECD, CERI
Paris: OECD, 1999, 178 p.
ISBN: 92-64-17026-X, en
OECD,
2 rue André-Pascal,
F-75775 Paris Cedex 16,
oecd@oecd.org
EN FR

The phenomenon of social exclusion has become one of the outstanding problems on the eve of the 21st century. Even with the long-term trend towards rising general levels of affluence across OECD countries, large sections of our societies are missing out and for some prospects are getting worse. Learning (in formal education and in a wide range of other community and enterprise settings) represents one of the most important means of overcoming exclusion. While much is known about the impact of schooling for young people, the relationships between exclusion and adult learning are less well examined. This study seeks to address this gap, focusing on 19 innovative learning



tion of the classification across countries. Thus, it is the aim of this manual to offer clear guidelines on how to apply the classification for fields of vocational training.

Who's who in distance learning.

Bonn: International WHERE+HOW, 1998, 624 p.
ISBN: 3-925-144-11-0
EN

The International Who's Who in Distance Learning offers an opportunity for global networking between people and programs delivered online or at a distance. Containing 867 entries from 58 different countries, this reference source provides details of the leading personalities in the field of online and distance learning, including addresses, biographical details, education, career information and academic achievements, affiliations, professional experience and publications. A prominent feature of the book is an index with fields of specialisations, offering a unique way of locating and contacting experts in all branches of online learning.

The future of continuing education in Europe: lifelong learning for all, in changed learning environments.

DOHMEN G
Bundesministerium für Bildung, Wissenschaft, Forschung und Technologie, BMBF
Bonn: BMBF, 1998, 90 p.
BMBF,
Heinemannstr. 2,
D-53175 Bonn
EN

'Lifelong learning by all' is a key concept with respect to the future of learning and of continuing education in Europe. One of the European Union's major challenges is to make all its citizens aware that learning is a very natural part of their lives and to promote learning and mediating are essential social activities of the future - with the aim of developing untapped human potential for creative solutions and for intelligent management of acute transformation problems. Meeting this challenge will involve mainly: developing the diversity of learning opportunities, creating networks of different learning opportunities, recognising all formal and infor-

mal forms of human learning, developing open, self-directed learning, etc. and integrating all of these reform approaches within a European learning network.

Qualifikation als Standortfaktor: Deutschland, USA, Japan im Vergleich.

MÜNCH J
Hochrhein am Main: Neres, 1999, 197 p.
ISBN: 3-9802836-9-0
DE

In this publication qualification as a locational factor of the three strongest economic powers - Germany, United States and Japan - is systematically analysed. The educational and vocational system - starting from secondary education, higher education, vocational training to continuing vocational training - is evaluated and compared. None of the examined countries is without weaknesses, but Germany comes off well when compared with the United States and Japan. Especially the dual system proves to be superior to the forms of vocational training found in the States and in Japan.

The cost of vocational training.

TSANG M C
Education and Training (Bradford) 41(2), 1999, 56-62 p.
ISSN: 0040-0912
MCB University Press,
60/62 Toller Lane, Bradford,
West Yorkshire, England BD8 9BY
EN

This work discusses the methodological issues in costing two common types of vocational training programmes: institutional vocational training and enterprise-based vocational training. It points out that the survey/interview approach should be used to collect data from institutions instead of from the government in costing institutional vocational training, and that more frequent use should be made of the case-study and survey methods in costing enterprise-based vocational training. Based on empirical studies on both developed and developing countries, it analyses the costs of different types of vocational training programmes. It shows that training costs are influenced by such factors as the technology of training, teacher costs and their determinants, pro-



gramme length, extent of wastage, extent of under-utilisation, of training inputs and scale of operation. In general, vocational/technical education is more costly than academic programmes and pre-employment vocational training is more expensive than in-service training. It discusses the implications of these findings for training policies.

Lifelong learning and the trade unions.

Training strategies for tomorrow 1(3), 1998, p. 10-13
ISSN: 1369-7234, en
EN

Increasingly people need lifelong access to high quality guidance on choices relating to their learning and work. Many employees look to their work-place for their first line of support. The trade unions believe that they have the key role to play both as advocates and as providers of information, advice and guidance.

Of cabbages and key skills: exploding the mythology of core transferable skills in post-school education.

HYLAND T; JOHNSON S
Journal of Further and Higher Education (Abingdon) 22(2), 1998, p. 163-172
ISSN: 0309-877X, en
Carfax Publishing Limited,
PO Box 25,
Abingdon, Oxfordshire OX143UE, UK,
E-mail: sales@carfax.co.uk
EN

The concepts of core, generic or key skills are now ubiquitous in educational discourse and an integral part of recommendations for education and training programmes from school to university. It is our contention that — in the sense of free-standing, context-independent abilities — such skills are without philosophical or empirical support and are entirely illusory. Although the ideas of integrated core units or common learning experiences underpinning the post-school curriculum have some educational justification, the pursuit of general transferable core/key skills is a wasteful chimera-hunt and should now be abandoned.

Contemporary apprenticeship: perspectives on learning, teaching, policy and design.

FULLER A (ed.);UNWIN L (ed.)
Journal of Vocational Education and Training (Wallingford, Oxfordshire) 50(2), 1998, 325 p.
ISSN: 1363-6820
Triangle Journals Ltd,
PO Box 65, Wallingford,
Oxfordshire OX10 0YG, United Kingdom,
E-mail: journals@triangle.co.uk
EN

This fully-refereed international journal publishes scholarly articles that address the development of practice and theory in work-related education, wherever that education occurs. This specific edition aims to stimulate a much needed debate about the relationship between work and learning, and the role of apprenticeship at a time when difficult and complex questions are being asked about the future of work, about the ability of organisations to adapt to change, and about the needs and aspirations of people around the world for many of whom the world of work no longer offers security or comfort.

Of paradigms, policies and practices: the changing contours of training and development in five European economies.

HERATY N (ed.);MORLEY M (ed.)
Journal of European Industrial Training 22 (4,5), 1998, 228 p.
ISSN: 0309-0590
MCB University Press Ltd,
62 Toller Lane, Bradford,
West Yorkshire, England BD8 9BY

This is an issue about the training changes in five countries: It is divided into five articles. The first one seeks to describe the nature of education and training provision in Denmark. The second is a presentation of the recent debate in the Netherlands, which has raised the question of whether the Dutch economy can meet the requirements of the emerging knowledge society. The third paper aims to highlight the main debates in the field of skill development in a United Kingdom context. The fourth paper is divided into four key sections: 1) an overview of Ireland in terms of her labour market, educational



and vocational infrastructure, 2) a description of the evolution of the national system of training and development in Ireland, 3) a review of current practices and trends in training and development at the organisational level 4) discussion on a range of critical challenges facing Ireland as we approach the new millennium. Finally, the fifth paper examines human resource development in Sweden, sets down the characteristics of the national education and training system and examines recent policy developments.

Lifelong learning and the European Union: a critique from a 'risk society' perspective.

HAKE B

LLinE: Lifelong Learning in Europe. (Helsinki) 1, 1998, p. 54-60

ISSN: 1239-6826

*LLinE, KVS Foundation,
Museokatu 18 A 2,
00100 Helsinki, Finland*

EN

Is biographical competency the one to enable individuals to cope with the risks associated with transitions and critical life events? The dangers of social exclusion lie in the failure of current EU policies on education to recognise the Europeanisation of labour markets. The biographical work required to learn to survive in the learning society is a risk situation which confronts an ever-growing number of Europeans. The learning society with an unequal distribution of possibilities to intentional learning is a risk society where social exclusion is the anti-thesis of the promise of individual development. This paper offers a critique of EU policies on lifelong learning in terms of sociological theories of globalisation, reflexive modernisation and risk society.

European Union: policies, programmes, participants

Profile of... Key topics in education: volume 1: financial support for students in higher education in Europe. Trends and debates.

Education Information Network in the European Community; Education Information

Network in the European Community, EURYDICE

Brussels: EURYDICE, 1999, 24 p.

ISBN: 2-87116-284-0, en

*European Unit of EURYDICE,
rue d'Arlon 15,*

B-1050 Brussels,

Tel. 32-2-238-30-11,

Fax. 32-2-230-65-62,

EURYDICE.UEE@euronet.be

Cat.Nr: D/1999/40008/8;

EN FR

This summary publication refers to the study 'key topics on education' commissioned by DG XXII of the European Commission and conducted by EURYDICE. It deals with the public financial support to students in higher education. Its approach broadens the statistical perspective so as to analyse the operation of systems (criteria for award, bodies responsible for decisions on expenditure, the number of students and pupils concerned, etc.) and situate them in the context of the different cultures and of their history.

The 1999 employment guidelines: Council Resolution of 22 February 1999.

Council of the European Union
Luxembourg: EUR-OP, 1999, 14 p.

(Employment and social affairs)

ISBN: 92-828-6375-1, en

From EU national sales offices

<http://eur-op.eu.int/en/general/s-ad.htm>

Cat.n°.: CE-18-98-542-EN-C

EN FR DE DA EL ES FI IT NL PT SV

It is essential that the Employment Guidelines are transformed into concrete national action plans. The use of common indicators, based on comparable statistics, is of crucial importance for an effective monitoring and evaluation of policies, both at national and at Community level. So far, basic employment performance indicators have been used in several joint employment reports and the work on policy indicators, referring to the concrete Guidelines, is well under way. It was agreed at Luxembourg that the ultimate objective of a coordination of Member States' employment policies is to arrive at a significant increase in the employment rate in Europe on a sustainable basis. In order to produce concrete results,



Member States: 1) are urged to support the process of defining and collecting comparable data 2) will need to ensure that adequate and comparable data systems and procedures are available. In addition, Member States are invited to set themselves national targets which could be quantified wherever possible and appropriate.

http://europa.eu.int/comm/dg05/emplesf/empl99/guide_en.htm

Note: Official Journal of the European Communities C 069, 1999 Luxembourg Improving the human research potential and the socio-economic knowledge base: (1998-2002).

European Commission - DG XII
Brussels: EC-DG XII, 1999, various pagination
*European Commission - DG XII,
Rue de la Loi 200,
B-1049 Brussels*
EN

This document is a compilation of four papers. The main one is the Work Programme for the key action 'Improving the socio-economic knowledge base' which is part D of the Work Programme for the Specific Programme 'Improving the human research potential and the socio-economic knowledge base'. It describes the content of the action lines which are open for proposals, and includes an indicative timetable for programme implementation. The second paper is the Call for proposals and tells which action lines are open and the appropriate deadline for proposal submission. The Evaluation Guide describes the criteria which are to be used in the evaluation of proposals and one can use this guide as a checklist for the completeness of his proposal. The Guide

for Proposers also contains references to other documents, reports, forms and software tools which are of assistance in the preparation of proposals.

A Europe for all: for a European strategy to combat social exclusion: EAPN contribution to the European Commission Conference of 6-7 May 1999.

European Anti-Poverty Network, EAPN
Brussels: EAPN, 1999., 10 p.

EAPN, rue Belliard 205 -

Bte 13 -

B-1040 Brussels

Tel. 32.2.230.44.55,

Fax 32.2.230.97.33

e-mail: eapn@euronet.be

EN

This document extends the scope of EAPN's discussions based on the Resolution adopted at its November 98 Oporto General Assembly and constitutes the input EAPN wishes to give to the consultation meeting of 6 and 7 May 1999. It will be amplified in the coming months as the dialogue within EAPN member associations intensifies and the policy dialogue with the Commission and the other Community institutions moves forward. In the annex to its document, the Commission paints a stark picture of the worsening exclusion and inequality gaps of recent years, and the danger they entail for social cohesion and European integration. The document affirms that completion of the single market and the introduction of the euro, by strengthening market mechanisms, will create 'winners and losers'. We believe that in putting forward a strategy based essentially on the exchange of good practice between players, the Commission fails to draw the full consequences of its own conclusion.



From the Member States

D Modul für Modul zum Berufsabschluß: die Modellversuchsreihe 'Berufsbegleitende Nachqualifizierung' zwischen Flexibilisierung und Qualitätssicherung von beruflicher Bildung.

DAVIDS S (ed.)

Bundesinstitut für Berufsbildung, BIBB
Bielefeld: Bertelsmann, 1998, 280 p.
(Berichte zur beruflichen Bildung, 216)
ISBN: 3-7639-0830-7

The contributions in this volume address the pilot project series 'In-service training for qualification while in employment'. They are organised according to the following areas: 1. modular in-service training in Germany, 2. learning process control in modular training systems, 3. modularisation and the difference between the German concept of the regulated occupation and European educational systems. The articles also consider the importance of modular training in increasing the flexibility of the training system. An additional focus of the discussion is quality standards in the implementation of modularisation. The theoretical approach is compared with other European modular concepts.

Qualifizierungsanforderungen und Qualifikationsvermittlung.

KATH F

Bundesinstitut für Berufsbildung, BIBB
Berlin [et al.]: BIBB, 1998, 14 p.
(Reden und Aufsätze aus dem BIBB)
*BIBB, Fehrbelliner Platz 3,
D-10707 Berlin*
DE

The author addresses recently criticised features of the development of the dual system of vocational training. He generally accepts the framework of the dual system. Among the most heavily debated points are the concept of the regulated occupation, issues relating to additional skills and the flexibility of training regulations, the planning of training, cooperation between training sites, training supply and education policy issues. The author cites initiatives aimed at modernising dual system training.

Weiterbildung als Lern-, Such- und Arbeitsprozeß.

SAUTER E

Bundesinstitut für Berufsbildung, BIBB
Berlin [et al.]: BIBB, 1998, 8 p.
(Reden und Aufsätze aus dem BIBB)
*BIBB, Fehrbelliner Platz 3,
D-10707 Berlin*
DE

The author considers how in continuing vocational training the concept of learning has been transformed into a process-based notion of lifelong learning. The contours of learning have changed in two dimensions. On the one hand further skills are being acquired directly after training, a circumstance that has created a link between vocational training and continuing vocational training ('vertical' dimension). On the other hand the 'horizontal' dimension has strengthened the link between working and learning. New forms of learning and training have arisen to complement traditional forms of continuing vocational training.

DK Dansk uddannelses og erhvervs leksikon.

[Danish educational and vocational dictionary].

Rådet for Uddannelses- og Erhvervsvejledning
Copenhagen: RUE, 1999, 2 vol, 1416 p.
ISBN: 87-7773-175-1
*RUE, Vester Voldgade 123,
DK-1552 Copenhagen V*
DA

DUEL is a book of reference in which educational programmes and fields of work have been indexed. DUEL consists of 955 alphabetically arranged articles on education and work. The articles contain standardised information about educational programmes and/or fields of work. The articles on education describe the providers of a programme, rules of admission, form and content of a programme, economy during studies, possibilities of continuing education, related programmes, further information and important addresses.



Fremtidens uddannelser: ny struktur og sammenhæng.

[Vocational training in the future: new structure and improved Cooperation between VET institutions].

BRAAD C (ed.)

Dansk Industri, DI

Copenhagen: DI, 1999, 28 p.

(Debat)

ISBN: 87-7353-293-2

DI, 1787 Copenhagen V

DA

This publication is part of a debate series on the Danish education system published by the Confederation of Danish Industries (DI). In this issue, DI focuses on vocational education and training both in regard to structure and programmes. DI proposes that all institutions, which offer VET to the level of bachelor, should be merged in new institutions called VET Academy Centres. Furthermore, DI suggests that the VET programmes should be improved in terms of coherence between the programmes. The programmes should be more flexible and the possibilities of credit transfer should be improved. The aim is to ensure the attractiveness of the VET programmes and also to create a more cost-efficient VET system.

Undervisning af 16-25-årige flygtninge og indvandrere: en undersøgelse af særlige tilbud.

[Training of 16-25 years old refugees and migrants: an investigation of special offers].

LA COUR A et al.

Udviklingscenter for undervisning af voksne indvandrere, UVI

Udviklingscentret for undervisning og uddannelse aftosprogede børn og unge, UC2

Copenhagen: UVI, 1999., 74 p.

(Debat)

ISBN: 87-90808-00-2

DEL, Rigsgade 13,

DK-1316 Copenhagen K

DA

Among young refugees and immigrants in Denmark a substantial part completes basic schooling and continues in the education system. However, another substantial part falls outside the established education system and is in danger of social exclusion. This report describes how

counties and municipalities have handled this group of young people by creating special educational offers which aim at improving their chances of entering youth education or the labour market. In the report, 18 regional and local courses are described. The report furthermore gives a description of the target group: their number, who they are and where they live.

Videnbaseret konkurrence: udfordring for efteruddannelsessystemet.

[Knowledge based competition - a challenge for the continuing education system].

WINGE B;BRAAD C (ed.)

Dansk Industri, DI

Copenhagen: DI, 1999, 40 p.

(Debat)

ISBN: 87-7353-295-9;

DI, 1787 Copenhagen V

DA

This publication is part of a debate series on the Danish education system published by the Confederation of Danish Industries (DI). In this publication, DI offers its contribution on how to improve the continuing training and education system in Denmark. DI suggests that the system has to be simplified in terms of organisation, administration and access. DI points out that technological development necessitates upgrading the skills of all employees: unskilled, skilled as well as employees with further and higher education. Furthermore, DI points to a better integration of continuing training and education in the education system. Overall, DI concludes that a reform of the continuing training and education system is necessary in order to ensure the competitiveness of Danish industry.

F La formation professionnelle: diagnostics, défis et enjeux: rapport de Nicole Péry.

[Vocational training: diagnostics, challenges and stakes: a report by Nicole Péry].

Secrétariat d'Etat aux droits des femmes et à la formation professionnelle

Paris: Secrétariat d'Etat aux droits des femmes et à la formation professionnelle, 1999, 246 p.

Secrétariat d'Etat aux droits des femmes





et à la formation professionnelle,
Paris 07 SP
FR

After underlining the changes in working population, the transformation of the labour market, the limits of the training schemes financed by the companies, the role of the public authorities in training for persons seeking employment and the job integration of youth, four lines of development are presented: development of a guaranteed and transferable individual right, recognition of experience in the professional career, development of alternance training, clarification of the role of the different actors. The second part presents some figures on the following: financing of training by enterprises and the possibilities for employees to go in for training, inequalities of access to training, the training of persons seeking employment, job integration of youth, certification and validation of acquired qualifications and experience, Community law and laws governing training in European Union countries.

Recueil d'études sociales n°14: parues de septembre à décembre 1998.
[Collection of social studies No. 14: published from September to December 1998].

Institut national de la statistique et des études économiques, INSEE
Paris: INSEE, 1999, 409 p.
ISSN: 1259-4261
ISBN: 2-11-067015-0
FR

This collection of social studies is a compilation of articles published by the following French organisations dealing with studies and statistics: INSEE (Institut National de la Statistiques et des études économiques), INED (Institut national d'études démographiques), CREDOC (Centre de recherche pour l'étude et l'observation des conditions de vie), CEE (Centre d'études de l'emploi), CEREQ (Centre d'études et de recherches sur les qualifications) and the statistical services of the Ministries of Labour, Health, Education and Justice. The articles are grouped around five themes: population, training, professional activity, income, lifestyles. In the field of training the data permits an analysis of the sector according to the following criteria: primary edu-

cation, secondary education, higher education, vocational education and training, continuing training, education system.
<http://popinfo.ined.fr/Base/Services/Recueil/Recueil.htm>

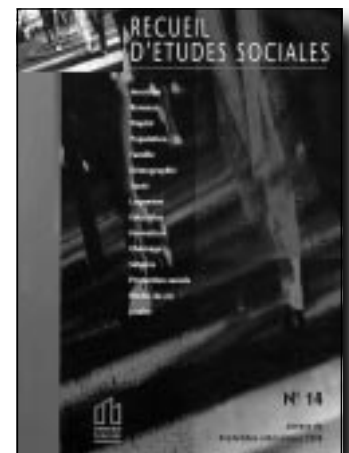
GR 'Compensatory Legitimation' in Greek Educational Policy: an explanation for the abortive educational reforms in Greece in comparison with those in France.

PERSIANIS P
Comparative Education (Abingdon) 34 (1),
1998, p. 71-84
ISSN: 0305-0068
Carfax Publishing Ltd,
PO Box 25,
Abingdon, Oxfordshire OX14 3UE, UK,
E-mail: sales@carfax.co.uk
EN

This article examines the political dynamics of planning and implementing educational reforms in Greece and makes a comparison with those in France. It argues that the state's concern for 'compensatory legitimation' of its authority provides a more adequate theoretical tool for explaining the long series of abortive educational reforms in Greece than the ones employed so far by Greek sociologists and historians of education. Furthermore, by comparing the strategies for compensatory legitimation employed in the two countries, the article reaches the conclusion that in Greece, whilst the invocation of legal and constitutional norms is very old and common, the use of expertise and the invocation of a discourse of participation are very recent and limited compared with France.

IRL Cross-cultural training and education in the Republic of Ireland.

McPHERSON A; McDONALD S
University College Dublin - Graduate School of Business
Dublin: The School, 1999, 33 p.
(Business research programme working paper, 27)
Graduate School of Business,
University College Dublin,
Carysfort Avenue, Blackrock, IRL-Dublin,
<http://www.ucd.ie/hostmaster>
EN





Based on a survey of 140 hi-tech foreign-owned multinationals operating in Ireland in late 1995 and on a study of a cross-cultural business training and education programme, the study examines the international training and placement practices of large multinational companies operating in Ireland and the implications for future competitiveness of international training. It also looks at the FAS- Training and Employment Authority Overseas Sponsorship Programme (OSP). The study finds that 63 per cent of these companies sent employees abroad for training at other branches. Some 44% of companies used international training facilities for technical professionals and technicians and 41% sent managerial and administrative staff abroad. Only 15% sent manual operatives away for training and 7% sent clerical staff. Up to 72% of staff involved in management, including human-resource management, were sent away by some companies. The figure for financial, marketing, sales and staff requiring languages skills was 67%, and that for staff involved in information and other advanced technology training was 66%. One-third of the companies surveyed were not familiar with the FAS OSP scheme. The study finds that 'while the scheme acted well in terms of providing cross-cultural education and training at an individual level, the re-integration of these skills back into the economy was less than optimal'.

P **A problemática da certificação profissional.**
[The problems of vocational certification].

DUARTE A

Instituto do Emprego e Formação Profissional, IEFP

Lisbon: IEFP, 1999, 112 p.

ISBN: 972-732-397-Y

Instituto do Emprego e Formação Profissional, Av. José Malhoa 11 - Piso 0, P-1070 Lisbon

PT

This monograph is divided into two parts. The first part describes the problems of vocational certification: it presents certification as carried out at present and depicts its possible development on the employment market in keeping with the education and training levels of the work-

ing population. The second part takes a look at the different methodologies for vocational certification.

Job rotation: formação profissional em rotatividade.

[Job rotation: vocational training through rotation].

NUNES L [coord.]

Instituto para a Inovação na Formação, INOFOR

Lisbon: INOFOR, 1999, 103 p.

(Projecto Metodologias de Formação e Desenvolvimento Curricular)

ISBN: 972-97579-3-3

INOFOR, Rua Soeiro Pereira Gomes 7 - Edif. América sala 29 - 2º andar, P-1600 Lisbon

PT

This monograph deals with a form of organisation called 'job rotation' which involves employed and unemployed workers simultaneously and which has an impact on the concept of training and its social consequences. This work attempts to deepen knowledge of 'job rotation' by highlighting its innovative dimensions in the context of the different types of training provision existing in Portugal, and discussing its ability to produce good training practices as part of a strategy to disseminate innovation (mainstreaming).

Na rota da pedagogia.

[On the teaching route].

MÃO-DE-FERRO A

Lisbon: Edições Colibri, 1999, 283 p.

ISBN: 972-772-069-2

Edições Colibri, Faculdade de Letras-Alameda da Universidade,

P-1699 Lisbon Codex

PT

This monograph deals with several aspects related to the training of trainers. The problems covered are: the functions of the trainer; trends and teaching methods in the training of trainers; the trainer-learner relationship; training models (distance learning and modular training); teaching objectives; programming and evaluation of training; the new technologies as teaching instruments. The monograph also contains some reflections on the education system and the employment-training relationship.



SE Competence accounting: methods for measuring and valuing key-competencies.

LAURELL K;HÖRTE S-Å

Luleå University of Technology, Division of Industrial Organization;

Luleå: Luleå University of Technology, 1999, unpag.

(AR, 99(33))

Luleå University of Technology,

Division of Industrial Organization,

S-971 87 Luleå, Sweden

EN

When considering individual and organisation competencies in an organisation, methods for measuring and valuing competencies need to pay attention to the link between individual and organisational learning as well as to the risk involved with losing key-competencies. The methods investigated in the field of human resource costing and accounting and knowledge management describe and illustrate that the value of human resources decreases and that the companies will lose experience when employees retire. The methods used for estimating the losses of key-competencies must be complemented by other methods where the learning process within companies must also be taken into account.

Konstruktivism i distansutbildning: Studerandes uppfattning om konstruktivistiskt lärande.

[Constructivism in distance education: Students thoughts about constructivistic learning].

JOHANSSON K

University of Umeå, Faculty of social sciences

Umeå: University of Umeå, 1999, 199 p.

(Akademiska avhandlingar vid pedagogiska institutionen Umeå Universitet, 99(48))

ISSN: 0281-6768

ISBN: 91-7191-644-X

Umeå Universitet,

Pedagogiska Institutionen,

S-901 87 Umeå, Sweden

SV

The main purpose of this thesis was to clarify whether there would be difficulties in using constructivistic learning in distance education in which interactive video was used. Other purposes of the thesis were to study the quality of learning in distance education compared to conventional education. All the findings showed that the difficulties in distance education did not influence negatively the possibilities of introducing constructivistic learning.

UK A new way of learning: the Ufi network: developing the University for Industry concept.

University for Industry, Ufi

Sheffield, England: Ufi, 1999, 34 p.

Ufi, The Innovation Centre,

217 Portobello, Sheffield S1 4DP, England

EN

The University for Industry (Ufi) is a major government sponsored initiative to encourage and facilitate access to lifelong learning. Ufi is a limited company and has applied for charitable status. Its Chairman, Vice-Chairman and Directors have been appointed by the Secretary of State for Education and Employment. This development plan sets out how Ufi plans to work with those involved in lifelong learning - including education and training providers, employers and employees, local authorities, trade unions, development agencies, funding councils and agencies and awarding bodies - and help them to reach larger audiences. The plan establishes priority target groups - adults with low basic skills; employees in small enterprises; employees in the retail, automotive component, environmental, and multimedia industries; and individuals and businesses who need to improve their information technology skills. Ufi will establish a website and a Learning Direct telephone helpline supported by information databases to match the needs of learners and suppliers. A network of learning centres will be established and these will be a focus for delivering Ufi learner support services.



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<http://www.trainingvillage.gr>

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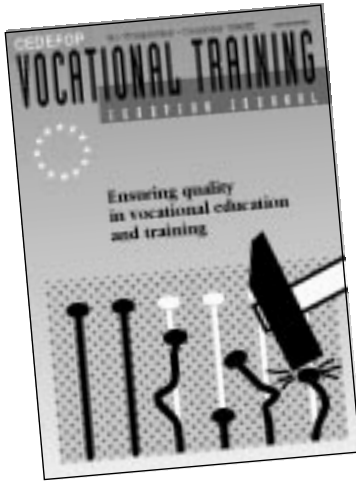
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