

Labour Education and Training Research Network



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Knowledge and skills for the new economy: The role of educational policy

by

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- 1. The German education and training system traditionally was characterised by a mixed human capital and human skills and resources model. In the field of vocational training, this provided a surplus of qualifications, defined in the categories of a pattern of occupations. The regulated education and training in the Dual System of apprenticeship aimed at lifelong employment in the same occupation and preferably in the same enterprise. This system has come under pressure from structural change in economy and society.**

Following the distinction made, by Alvaro Espina, between the "human capital model" and the "human skills and resources model", one can say that in Germany, education and training policy followed traditionally a mixed model. It was characterised by a sharp division between "general education" on the one side and "vocational training" on the other. In traditional thinking, general education was to provide all young people with basic competencies of reading, writing, counting etc. The target of higher general education was to provide for academic studies and professions, whilst for those who could not – from reasons of personal capability or from economic reasons - succeed to enter the academic way, vocational training prepared for jobs. The latter was formed by the "Dual System" of apprenticeship. It is informative that the inherent ideological objective was interpreted as leading to "a human being through occupation".

The general education pathway follows till today the human skills and resources model, the vocational training pathway more the human capital model as it's supply of training opportunities is provided by the enterprises. Though in recent years, transition possibilities between the general and the vocational education and training systems have grown, both remain separated spheres.

In the seventies, under the social-democratic-liberal government some approaches to establish a planning model for education and training were made, following more or less the idea of a human capital model. But they all failed: The needs of economy were not predictable and, under the condition of free choice of education and training pathways, access to education and training schemes could not be controlled.

The German model has provided a more or less stable equilibrium for a long time, though supply of training places in the Dual System in most of the years was not sufficient for the demand. One point of criticism was that the output of the enterprise based vocational training system always was oriented at present needs and not at future requirements.

Traditional training schemes in the Dual System targeted a lifelong occupation (preferably in the same enterprise). Since the seventies, regulation policy on the training schemes aimed at a certain flexibilisation through widening the range of the contents and through

improving the methods of training: Vocational training should prepare young people not only for a single job, but for a range of jobs in a broad "occupational field". This policy has been pursued for about 20 years, under control of the professional organisations of employers and trade unions.

But the traditional education and training policy has come under pressure from structural change in economy and society. Educational problems are going to be discussed. The structure of occupations and professions and the problem of safeguarding lifelong learning have been put on the agenda.

The level of regulation in the field of continued training is very low compared with initial training as the idea was that lifelong adaptation to economic needs should be provided by initial training. Nevertheless, a lot of continued training activities are carried out and undertaken every year by enterprises, individuals and the labour market policy.

- 2. The emerging "New Economy" is more than the sector of IT (information technology) industries. Beyond global action and rapid exchange of information, it is characterised by a new mode of economic activities in all economic sectors, based on knowledge as the crucial production factor, on new forms of employment and new organisation of work (inside and outside the enterprises), and on new standards of quality of products and services.**

Macro trends

The White Paper of the European Commission "Teaching and Learning – Towards the Learning Society" (White paper 1995) has outlined some Europe-wide macro trends in economies and societies:

- *Informatisation* transforms the way work, services and production are organised and also has a deep impact on daily life. Knowledge and information are the raw materials of the future. Access to these - above all via education - will in future be crucial to individuals' chances of taking part in working, social and cultural life.
- The second macro-trend is *globalisation*. Internationalisation of the economy and increasing competition on world markets mean that national labour markets, which in the past were relatively isolated from one another, are growing together. This affects the way in which new jobs and new employment are created and also has an impact on the way employees compete on company and supra-company labour markets. In this context individual employability is very important.
- *Scientific and technical knowledge*, according to the white paper, are paving the way for the traditional type of manual work to be replaced by information-related work as the predominant type in the future. On the other hand, scientific and technical progress also creates uncertainty, fear of the consequences of technology and social conflict. This is why the white paper comes out in favour of strengthening education as a tool for achieving greater social cohesion.

In addition to these trends, there is also a movement towards greater *individualisation* and a change in the *relationship between the genders*. Both these alter the demands which individuals make of work and training and their participation in initial and further training. New forms of work and employment are a response to these.

New forms of employment

These macro-trends are what underlies certain developments in companies which have a direct impact on work and training: an increase in service activities, new forms of work organisation and new corporate structures, tele-working, working in virtual organisations and the erosion of the normal employment contracts.

Service activities are increasing both at the macro-economic and micro-economic level within companies. Linked to these are *new forms of work organisation and corporate structures* that are replacing the Taylorist approach which predominated for decades. The best known form of this development is group work. The result is to some extent a greater degree of autonomy for individuals at their workplace. These ongoing changes require an ability and willingness to adapt to new forms of organisation, to continue to learn, to co-operate and to display creativity and responsibility. In other words, personal competencies are required which build on longer-term participation in training processes and on individualisation.

Tele-working is the best known form of an approach to work which removes the traditional constraints of time and space. Tele-working makes it possible to operate more flexibly and with greater control over an individual's time than under a Taylorist system - outside the formal organisational structures of a factory or the production process. Working in *virtual organisations* is another new way of organising work. This is project-based, takes place in a continually changing context of co-operation - sometimes in different locations - and is held together via electronic networking.

All these are indications of the way that the normal working set-up is being eroded. The traditional job based on lifelong employment in an occupation for which an individual had been trained, with a standard eight hour day and tasks determined from above - and with a regular income regulated by law or by collective agreements - developed historically around male working roles. This is now increasingly being replaced by flexible, insecure forms of employment. Within companies, work is increasingly being removed from spatial constraints, and group or project work or flexibilisation in terms of specialism are becoming increasingly common. To these can be added "atypical" forms of employment such as short-term contracts, temporary work, part-time work and pseudo self-employment.

The development of organised work could end up with the creation of "labour entrepreneurs" ("Arbeitskraftunternehmer") as have been described in sociological analyses (Voß/Pongratz 1998): these people no longer sell their labour potential but rather products created through their autonomous activities, though they are otherwise

dependent on the company for whom they work and are incorporated into its division of labour.

But all this does not mean that the "old" economy will disappear within a couple of years. Rather, the "old" and the "new" economy will stand side-by-side for long time, but the development of the economy (and society as well) will be more determined by the principles of the new economy.

3. The New Economy has to be linked with a knowledge-based society. A learning society is more than this: a society capable of cultural self-reflection and adaptation to new challenges. Knowledge as the driving force behind the developments requires a new pattern of competencies and qualifications on the side of individuals. In this context, IT competencies are very important, but the problem must not be confined to this dimension. Against the background of continuous change, a new set of general, personal and social competencies as complementary to specialised and technical qualifications seems to be needed.

Since the era of enlightenment we live in a knowledge-oriented society as opposite to a society relying on myths. In the 19th century knowledge became an indirect production factor, incorporated in techniques and materials. But only from the second half of the 20th century, knowledge as such became a direct productive factor. Some examples (de Haan/Poltermann 2000):

- In microchips, 70% of the price is determined by knowledge, only 12 by work.
- 70 – 80% of economic growth are caused by new or improved knowledge.
- In Germany, the relation between employed persons and persons in education and training and professionals in science and research has changed from 3:1 in 1960 to 2:1 in 1997.

It is important to make a distinction between knowledge and information (and between a knowledge-based society and an information society as well). "Information" means something what is "objective" but "knowledge" has a "subjective" dimension: It implies the competence to evaluate information and to act on this basis as a human and social being. This is a prerequisite for a society which is capable of self reflection and so of adaptation to new challenges – with other words, a learning society, which is not yet realised when many individuals are in education and training.

In the context of the internationalisation of economies, "lifelong learning" and "employability" have become key words of European vocational training policy. This shift of emphasis can be seen in the document of the European Lisbon summit in March 2000, entitled "Employment, Economic Reforms and Social Cohesion" (EU Council 2000). Attention is now focussed on promoting innovation and knowledge as crucial resources for achieving economic growth.

Often, the discussion on competencies and qualifications for the new economy or information society is confined to the specialised workers in the IT industries, as in the Okinawa declaration of the G7 statesmen from July 2000 or in the "Greencard" decision of the German government. But this is a restricted thinking. Furthermore, the multimedia information and communication technologies become a basic or cultural qualification like reading, writing and counting.

One can describe some general developments in the field of competencies as follows:

- From dealing with materials to acting with persons and dealing with abstract symbols
- From technical and specialised to general and social competencies.
- From learning to the ability to learn as basis qualification.
- From focus on specialised to a set of general, personal and social competencies.

In the new economy and the knowledge society, the type of "knowledge worker" comes to the fore and more and more workers have characteristics of this kind. For more and more persons, the capability and the opportunity to steady renewal the knowledge are crucial conditions for personal employability and for participation in society as well. The new, individualised production and service economy requires a large degree of self-monitoring and planning of an individual's own work capacity. The traditional nature of professions or trades "crumbles away" and individuals have to ensure that their labour potential is cultivated in a way that makes them employable according to the current needs of the market.

It is obvious that not all jobs in the new economy will be ranged at a high level of qualification. We will find also simple work with reduced complexity. But it seems that a lot of this "new" simple work will require some basic computer qualification. Furthermore, in structural change the ability of continuous adaptation and self organisation will be required. This means that we have to provide special assistance for the "weaker" and disadvantaged persons and also to get to like the idea of subsidised low productivity jobs. All the more for these persons, it is of highly importance to help them to develop personal and social qualifications.

4. The old problem of equal chances in the field of education and training is raised and has to be revisited in the new economy and the knowledge-based society. A modern welfare state conception has to provide both: Promotion of the talented and special support for the disadvantaged as well.

The old question of equal chances, raised by trade unions and social-democratic movements has to be revisited and redefined. Access to the new basic qualifications not only in initial education and training, but in further training as well, becomes a crucial requirement of the 21st century. And this not only true for working life but also for living in society as a social being.

New media and the Internet as informal sector for education and training

The new dimension of equal chances can be illustrated with the Internet as an informal source of education and training. In the light of the emerging new economy, not only the important role of companies, but also the new media of computer based training and the Internet for lifelong learning and training should not be underestimated. Next to "E-Commerce", a new type of "E-learning" is emerging, as you can see when visiting the Homepage of CEDEFOP in the Internet.

Nevertheless, it seems that the importance of the Internet as medium of education and training is overestimated. Because of the communicative structure of learning, the Internet as an autonomous source will not work. Learning in the sense of being able to act is bound to communication, and even reception of information needs feed-back with other persons.

But on the other hand, it is clear that multimedia and computer-assisted learning have already changed the traditional training landscape. Computer-assisted learning also takes place during periods when there is little work, self-directed learning through new forms of co-operation and learning arrangements is becoming possible, distance-learning is being introduced and virtual learning worlds are being developed on CD ROM and the Internet. For some time now, traditional distance-learning has been undergoing a radical change as a result of the new information and communications technologies.

All this means that training is becoming less formalised and access more democratic, but at the same time there is an increasing danger of new forms of social exclusion and inequality developing. As the learning society develops, the question of opportunities and access to lifelong learning is changing in its nature. In addition to the traditional socio-economic inequalities, for example membership of a social class - and socio-cultural inequalities, for example the relationship between the sexes - new forms of exclusion related to information technology are developing which partly overlay the old forms and partly strengthen them.

A new and differentiated conception of equal chances

In the past, sometimes it seemed that the traditional concept of equal chances as pursued in trade unions and social-democratic movements aimed at equal distribution at the end of the education and training process. This can no longer be the case. The education and training system must give different offers and answers for different groups and individuals. But it should also be clear that this cannot mean a status-quo-orientation – children start in school at the same point and nothing happens. This would mean a huge advantage for those who have more cultural capital from heritage. A modern welfare state has to provide promotion for the strong talents as well as special and additional help for those who are disadvantaged and have not enough social or cultural capital from their families.

5. Lifelong learning has become a crucial prerequisite of the knowledge-based society. But the conditions for lifelong access to learning and training opportunities still are underdeveloped. In this context, the resources time, money and recognition have to be organised. Also, the role of the enterprises has grown. A new type of in-house learning and training has emerged which is linked directly to the organisation of the production process. Under this aspect, lifelong learning refers to a learn-friendly organisation of work.

In the new economy and the knowledge-based society, lifelong learning for safeguarding the individual's chances to participate in employment has come on top of the political agenda. In this context, access to education and training must be safeguarded – this is true for general and initial training and for continued training as well.

One should not underestimate the role of the enterprises for further training and for chances to participate in learning. It is here that crucial conditions for lifelong learning are created in form of the structures used for organising work and company processes. Traditional forms of company organisation and division of labour ("Fordism" and "Taylorism") are known to hinder learning processes. In recent years, patterns and "cultures" of corporate and work organisation have changed. Developments in the *organisational structures* of companies are linked with - usually informal - forms of vocational and further training.

The "New Type of In-House Further Training"

Since some time now, we can see, within the companies, a "new type of further training" which has the following features:

- there is a direct relation to work, and training is carried out close to the workplace,
- it is integrated into the context of organisational development and company quality policy,
- it is extremely specific to individual companies,
- there is a move away from formal organisation of learning,
- all employees in the area concerned are virtually obliged to take part.

This new type of further training is characteristic for the new sectors or high level service and information technology industries but it is not confined to them: It emerges also in traditional manufacturing companies.

This type of training or skills development is only formalised to a limited degree, which means that transferability to other working and professional situations is limited because there is little or no formal assessment and recognition. In other words, the close link to the individual company means that this type of training only has limited usefulness in promoting occupational mobility; on the other hand, mobility is regarded as virtually a basic right in a situation of structural change in Europe.

An evaluation of the impact of the European Council recommendation on access to continued training (ETUC 1996) shows an increase in further training at company level - within the framework of the corporate reorganisation strategies. What is revealing is the fact that this increase in participation in further training took place in the context of the *collective strategies* and goals of the companies rather than to satisfy individual needs.

Thus, at a time of individualisation, it has been collective access which has been strengthened whilst participation in training following individual need still is underdeveloped. Above all, there is a lack of lasting and reliable mechanisms for individual access to further training.

Access to ongoing further training requires not just specific attitudes and motivation amongst the individuals concerned, but also certain *structural conditions*. In this context three resources are particularly important and these have to be organised at two levels:

- The resources are: time, money and recognition.
- The two levels are: the system of education and training and the company organisation.

In different European countries, the three resources are organised in different ways – with different roles of the state, the enterprises, the social partners and the individual stakeholders.

In Germany, following traditional trade unions ideas the resources should be provided by the employers and/or the state (but nevertheless organised under participation of trade unions). But reality is different from this model since long: Also individuals pay for their own training and provide time for it in spare time and in many enterprises this is regulated in company agreements between the employer and the works council (Betriebsrat). This has created a patchwork of conditions leading to very different possibilities of access to training.

Regarding this, the parties involved in the German Alliance for Jobs, Training and Competitiveness have agreed, in their last meeting in July 2000, on social partners negotiations on a framework for lifelong learning. This means that the conditions of time and money for enterprise based lifelong learning have to be regulated by collective agreements.

Four gateways to further training inside the companies

An analysis of company agreements signed between personnel committees or works councils and company management undertaken by the Hans Böckler Foundation identified four access routes to further training which have developed in recent years (Heidemann 1999):

- Traditional access to the *annual further training programmes* in the company. Access can be improved by advertising the courses on offer and enabling individuals to apply to participate in them. This is regulated by company agreements.
- The process of *establishing company further training needs*. Recent years have seen increasing numbers of participatory or "communicative" or "participative" approaches to establishing needs within the company. By involving the workforce in establishing individual training needs as part of company organisational and personnel development, new possibilities of access are opened up.
- Access via *individual interviews with employees* and agreements on goals as part of a modern approach to personnel development. These instruments also involve the employees in identifying their own training needs and lay down binding steps towards fulfilling these needs.
- In-company *organisational projects* in which participation in further training is more or less a precondition for continuing to work. We found examples of these above all in the context of work organisation, particularly the introduction of group-work or forms of project organisation.

These roads to access that we identified in German companies can also be found in other countries. However the first one - via the provisions offered by companies' training departments - is largely limited to large-scale companies which have a long tradition of personnel work. And there are significant differences between the countries according to whether works councils or company trade union organisations were involved in designing these access routes.

6. Facing the knowledge-based society, education and training policies in Europe more and more follow the emerging paradigm which stresses individual responsibility for the own educational career. This can be found in the recommendations of the Independent Committee of Education and Training Experts at Hans Böckler Foundation which focus at a new distribution of rights and responsibilities of the state, the education and training institutions and the individual learners.

Without doubt the knowledge-based society and the new economy mean increased individual freedom and a greater chance of participation on the one hand, but they also bring with them the danger of social exclusion of those who do not have the ability to organise themselves and/or do not have any opportunity to gain access to training provisions. Against this background a sea change in the European trade unions can be observed from participation in economic success via participation in social security to participation in knowledge and information:

- In the early days of the trade union movement - and right up at least until the Second World War - the main focus was on achieving a *just share of economic output*.
- During the next phase - which began before the Second World War and lasted until recently - it was *participation in the institutional benefits of social security* which was the main focus.

- Now, as we move into an information-based society, *participation in knowledge* has to become a central element in trade union programmes and policy.

In future it will be access to information and knowledge which is crucial in enabling individuals to secure their standard of living. Education and training may be all about individualised preconditions and consequences; but the conditions for participation and the opening up of opportunities require a more general, "collective" form of regulation either by legislation or by collective or company agreements.

If we look at the "map" of cultural and training "philosophies" in Europe then we can identify two poles - which also emerge from the current policy discussion in the trade unions and the Social-Democratic parties:

- One approach focuses on strengthening *individual responsibility* in order to empower individuals to find their own way in a constantly changing society. In the paper on "The third way / Die neue Mitte" produced by Tony Blair and Gerhard Schröder in June 1999 this is expressed as follows:

"Lifetime access to education and training and lifelong utilisation of their opportunities represent the most important security available in the modern world. Therefore governments have a responsibility to put in place a framework that enables individuals to enhance their qualifications and to fulfil their potential".

- The alternative approach concentrates more on *securing status* throughout working life. This approach is favoured more by traditionalist trade unions and comes out clearly in the paper "Vers un monde plus juste" produced by the French Prime Minister Lionel Jospin for the Congress of Social Democratic Parties in Europe in October 1999:

"C'est un état qui assume sa responsabilité irremplaçable dans le fonctionnement d'une économie de marché, en garantissant à chacun sa place dans la société." ("It is a state which shoulders its irreplaceable responsibility for the functioning of the market economy by guaranteeing everyone their place in society")

The recommendations of the Independent Committee of Education and Training Experts at Hans Böckler Stiftung

It seems that education and training policy for the knowledge-based society will be somewhere between these two poles. It seems that policies in Europe more and more follow an emerging paradigm which stresses individual responsibility for the own educational career. In Germany, the Independent Committee of Education and Training Experts at Hans Böckler Stiftung has drawn up some general organisation principles for the structure of a future education and training system, putting rights and responsibilities of the state, the education and training organisations and the individual learners into a new balance:

1. Responsibility of the individual person for her or his education and training career, as far as it is possible. Of course, this has to vary according to the age of the person and requires opportunities for individual choice between different offers.
2. Responsibility of the state to establish a framework for adequate, many-sided and plural supply, carried out by the different stakeholders. Also, the state has to secure equal chances in access to education and training.
3. Removal of the traditional closed curricula and education and training schemes by a modularised system in which the "customers" can choose and combine training units. This can meet changing needs of learners and changing requirements of economy and society as well and also serve for shaping individual profiles.
4. The education and training process should be carried out at a variety of different training locations, further developing the successful principle of "duality" in the German training system to the principal of "multiplicity".
5. Introduction of certain market elements into the education and training system, such as customer orientation (on the side of the education and training organisations) and financial contributions of the customers.

This implies more autonomy of the education and training organisations – such as schools and universities – to act for and more opportunities for the individuals of choice between different offers.

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