

# Vocational Education and Training as the Path of the Future

**5th BIBB Congress 2007**

**Mobilising potential  
Shaping change**

**Results and outlook  
for the future**

With extensive documentation  
on two CD-ROMs



Federal Institute for  
Vocational Education  
and Training

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- ▶ Researching
- ▶ Advising
- ▶ Shaping the future

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Federal Institute for  
Vocational Education and Training  
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Dear readers,



Manfred Kremer  
President of the Federal  
Institute for Vocational  
Education and Training

The motto of the 5th Congress of the Federal Institute for Vocational Education and Training (BIBB) was “Vocational Education and Training as the Path of the Future: Mobilising potential – Shaping change”.

The Congress on vocational education and training held at the Congress Center in Düsseldorf from 12 to 14 September 2007 brought together about 2000 participants and provided a platform for exchanging knowledge, experience and opinions. A critical stock-taking of what existed, reports on models tested, the presentation of new research findings and ideas, all that provided a stimulus for vocational education and training research, practice and policy-shaping.



Prof. Dr. Reinhold Weiß  
Deputy President, Head of  
Research

More than 300 papers, discussions and presentations in eight forums and 37 working groups provided information on the latest trends and insights in the field of vocational education and training research and practice.

In what direction will, and should, initial and continuing vocational education and training develop in Germany? That is a question that increasingly leads beyond the borders of the nation. It is above all the vocational education and training policy goals of the EU, first formulated in the so-called “Lisbon Strategy” of the European Council, that confront German vocational education and training with novel international challenges. There is a need to set targets of strategic dimensions with effects extending even into concrete training practice.

The European dimension demands transparency, comparability and standards, and that means above all that there has to be agreement on what needs to be measured and compared. In many areas, that requires rethinking; it requires developing new models and testing them in practice. There is a need for research, for a study of the foundations, the systemic conditions, the behaviour of individuals and organisations and of instruments and effects. The question of formulating common standards turned out to be the object of many discussions at the Congress.

The international challenges go hand in hand with the requirement for a deep-going, qualitative realignment of vocational education and training, based on the changed requirements of the world of work. Transition from knowledge orientation to competence orientation, process orientation, life-long learning – these core themes of the current debate in research, as well as in structuring work, are vocational education and training's answer to the changes in the occupational world. It demands constant readiness to integrate the newest trends and technologies into the world of work and everyday occupational practice and to anticipate them.

Changed occupational concepts call for new training concepts. In order to be able to anticipate looming new vocational demands as precisely as possible, the BIBB has always attached special importance to early identification. Pilot projects have the purpose of drafting innovative concepts for changed requirements. Transfer research seeks the optimum ways of propagating the knowledge acquired.

The Congress provided the participants with a multitude of stimuli. Thus it has lived up to its pledge to initiate new approaches, and also its task of reporting on quite concrete, practical innovations. One of the most important tasks of the vocational education and training system is to ensure sound and broad-based vocational education and training even in those enterprises that on their own are not in a position to impart all the subject-matter that is called for in the Training Regulation. That is why we devoted an entire forum to inter-company vocational training.

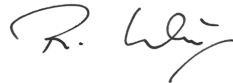
In addition to all the scientific insights it generated, the Congress sent out a clear vocational education and training policy signal. The dual system of vocational education and training is flexible enough to adapt to the changing requirements and conditions. It is and will continue to be capable of change, efficient, and innovative. We are encouraged by this experience, which was confirmed by the Congress and has been expressed over and over in many international comparative studies of the efficiency of vocational education and training systems, to stick to the basic orientation of the dual system of vocational education and training.

In conclusion, we would like to thank all the women and men who participated and all those who delivered papers at the 5th BIBB Congress, the Forum coordinators, the exhibitors and all those members of the Institute staff who helped organise it for their exceptional and immense personal commitment. Thanks also to the high-level representatives of politics, business and associations, especially those who spoke on the opening day. They all contributed energetically to the success of this Congress.



Manfred Kremer

President of the Federal Institute  
for Vocational Education and Training



Prof. Dr. Reinhold Weiß

Deputy President  
Head of Research



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## On this publication and on the proceedings of the Congress

The present volume documents the 5th BIBB Congress. It gives a summary outline of the content of the eight specialised forums at the Congress. The Forums have been presented according to the following schema: First, the theme is introduced subject-systematically. This presentation was made at the Congress by the coordinators and by the participants in the introductory plenum events in equal measure. A synopsis of the study groups follows. In some cases preference has been given to the subject-systematic sequence over the programme sequence. An outlook with references to action and research desiderata concludes the presentation of the forums.

You will find almost all the speeches, papers and presentations delivered at the Congress on the enclosed CD-ROMs. Completeness can naturally never be achieved, since some of the authors are publishing their contributions elsewhere. Of course the individual contributions reflect only the opinions of the speakers.

But of course there was more at the Congress than the purely technical speeches and presentations documented here. One highlight of the general programme was the awarding of the 2007 Hermann Schmidt Prize. It honours projects and initiatives which cooperate in an innovative and effective manner with foreign partners in order to enable trainees to spend extended periods abroad and to promote their intercultural competence. The prize winners were

- the Königslutter Stonemasonry Centre for its project “Europeanisation in regionally oriented crafts”,
- the Bebo-Wagner-Schule/Gewerbliche Berufsschule II of the city of Augsburg for its project “Classe Européenne” and
- the training network “Moderne Berufe in Europa/Südthüringen” e.V for its project “Cross-border Networking”.

Another highlight was the presentation of prizes in the BIBB photo competition on the subject “How do trainees see their training places?” Almost 500 trainees entered more than 1 000 photos for the competition, which was announced in the spring of 2007. It was organised and held by a six-person trainee team from the

BIBB. The three winners determined by a specialist jury received monetary prizes.

Information on the Hermann Schmidt Prize of the Verein Innovative Berufsbildung e.V. is available on the Internet under [www.bibb.de/hermann-schmidt-preis](http://www.bibb.de/hermann-schmidt-preis).

Information on the BIBB's Continuing Education Innovation Prize (WIP) is available on the Internet under [www.bibb.de/wip](http://www.bibb.de/wip).



## **Strategies to ensure initial and continuing training and occupational competence**

Coordination:

*Klaus Berger*

*Ulrich Degen*

- Demand for and development of skilled workers
- Promotion of the willingness of companies to train
- No graduation without follow-up – Vocational education and training for persons with disabilities and disadvantages
- Flexibility and configurability – Elements of a pilot project programme
- Developing vocational skills – Job Process Oriented Continuing Education and Training
- Thinking outside the box: Funding models for initial and continuing vocational education and training

## Forum 1

### **Strategies to ensure initial and continuing training and occupational competence**

Adequate education is a basic precondition for ensuring and realising the social participation potential of individuals. It is one of the most important resources of a housekeeping society in which the significance of information-based and science-based services, including production-related services, as compared to other sectors of the economy will continue to grow. Education in the spirit of sustainable development is essential to preserve the natural bases of life.

The discussion in Forum 1 showed that these aspects are of central importance for describing the current and future challenges to the education system in general and the vocational education and training system in particular. The original programme sequence has been departed from in the following presentation of the main issues dealt with by the forum so as to give more prominence to the connection between the different issues.

Thus the decreasing integrative power of the dual system of vocational education and training for young people with below-average educational potential was cited as the central problem in the vocational education system at present. A symptom of this is the rampant growth of a transition system into which almost as many apprenticeship applicants now flow as into the dual system of vocational education and training, without, however, offering them sufficiently compatible education prospects. In order to enable the transition system to really make qualified transitions possible, it was proposed that the approaches to greater flexibility in the reformed Vocational Training Act be used and that compatible certificates be issued for the partial qualifications acquired here. At the same time, it was generally agreed on that this largely unregulated transition system had to be curtailed. There were huge differences in the proposed means to that end, however. They extended from the strengthening of other, e.g. in-school courses of training through the introduction of certified training modules to the intensified introduction of shorter compatible courses of initial vocational training.

Contrasting with this were proposals for solutions that relied on increasing the willingness of companies to provide training. It was stressed that, taking up training activities meant learning opportunities for the company itself as well. The network training already practiced, which after all already involves new inter-company approaches to funding, was given as starting-point. Those approaches to funding, it was said, had to be expanded and there needed to be renewed discussion of the funding of initial vocational education and training.

The exact correspondence of qualification demand and qualification supply is not only a matter of qualification strategy and labour market structure at the transition from training to employment but also a matter of balance between supply and demand within company labour market activities.

In the following paper this problem is discussed against the background of a workforce potential in Germany that is shrinking and at the same time growing older on average while the demand for more highly qualified persons is increasing.

## **Demand for and development of skilled workers**

The current positive economic development increases the demand for skilled workers in the economy. National studies have shown that this does not mean a shortage of skilled workers overall, but for the time being just that bottlenecks have been observed in some industries. In the foreseeable future, however, the demand for skilled workers will coexist with a constantly accelerating reduction in the number of persons in the workforce. This demographic trend can result in an overall shortage of skilled workers.

This trend will involve a risk and threats to business and prosperity, but not only that. It is at the same time a challenge and an opportunity to shatter institutional incrustations and press ahead with modernisation.

The working group took up this problem and discussed it from two points of view. In the first the political and social fields of action



were in the foreground, in the second the strategies of enterprises and plants.

Fields of action can be found in almost all political and social areas. Targeted measures can help minimise the risks. Intensified recruiting of skilled workers abroad is a measure that is being discussed intensively at present. But the shortage of skilled workers is not a national problem, it is a Europe-wide phenomenon, so that Germany is competing with its neighbours for suitable skilled workers. It is therefore essential to make use of the capacities that are available. That starts in the elementary sphere and in the schools of general education and continues in vocational education and training and at the university level.

Adults without formal qualifications are a special problem group. Targeted and demand-oriented catch-up qualification during employment is indispensable for this group, which will continue in the medium term to have the least chances in the labour market.

Germany has not only a comparatively low rate of employment of older workers but also a lower rate of employment among women. Greater access to continuing education specifically for older workers and especially the ability to reconcile family and career are important building sites for increasing participation in the workforce and therefore an asset for the individual as well as for the national economy.

An ageing society and the concomitant ageing workforce call for targeted continuing education and/or skills development for older employees. Companies are already displaying the first reactions to this demographic change; they are responding by changing the continuing education and training they offer.

These fields of action in the education, employment and social system are closely interrelated and have to be harmonised and adapted to one another, especially regionally.

In connection with the second aspect, existing mismatches between educational prerequisites and company requirements as well as adaptive responses by the enterprises were discussed.

The importance of the dual system of vocational education and training and the training motivation of companies in the service sector was the theme of three contributions in the working group. On the basis of an analysis of the Federal Employment Agency's employee and company statistics, the oft-proclaimed hypothesis that the dual system of vocational education and training is too rigidly rooted in the manufacturing sector was rejected. Instead, the structural development shows a clear trend towards the service and knowledge society. However, there is a need for action to create new occupations in the interest of the further development of in-company training. For secondary services, a trend towards higher qualifications within the dual system of vocational education and training is in evidence overall.

If one pursues the question of how different qualification structures in the enterprises are reflected in their commitment to vocational training, one discovers an astonishing fact: If companies providing training are directly compared with companies not providing training, one finds that a higher proportion of employees with university-level qualifications goes hand in hand with a higher proportion of skilled workers trained within the company.

If the effects of personnel fluctuation and changing qualification demands rather than differing qualification structures are seen as factors in the companies' training decisions, the result is somewhat different: The analyses of data from the company panel of the Institute for Employment Research (IAB) confirm that for companies in the service sector, unlike those in the manufacturing sector, expected personnel fluctuations and a shorter shelf life of qualifications are important factors in their tending to decide against training and in favour of recruiting skilled workers from outside.

The changes in company skills requirements and the requirements for shaping company skills development processes were dealt with in other papers. Thus the example of work in integrated management systems was used to discuss skills requirements.

Here, as is typical for new labour and organisational structures, intersectoral knowledge and capability, process thinking, self-management and “time competence” and a high level of commitment to and identification with the company are prerequisites in addition to solid expert knowledge. Training under the dual system is seen as the most important basis for the further development of the competencies of skilled workers, which, however, can only be realised in connection with organisational structures and work processes that are sustainably conducive to learning and development.

### **Promotion of the willingness of companies to train**

The starting-point for the discussion in the working group on *“Promotion of the willingness of companies to train”* was the JOB-STARTER training structure programme of the Federal Ministry of Education and Research (BMBF), the goal of which is the creation of additional in-company training places and the improvement of training structures. In the course of the working group, three different perspectives generally regarded as relevant to the promotion of the willingness of companies to train were discussed.

#### *Perspective* ■ *Approach and persuade companies*

*“Support companies”* The training place developers’ know-how and knowledge of the industry are preconditions for success in approaching companies. Good strategies for opening up the companies are also decisive. One project sponsor reported that a so-called “door opener”, such as a recommendation, promised much greater success than any canvassing done without prior research. One should also be familiar with the company and its fields of business. But in the end, what is important is the right arguments and a clever choice of words. The term “reliable supply of recruits” is more likely to convince the companies than the term “training place procurement”. In some cases cooperative training can have the effect that cooperation in vocational training between two enterprises leads to a stable business relationship. With this argument it is also possible to lead enterprises, especially research and development enterprises, from merely making periods of practical training available to offering vocational education and training under the dual system.

### ■ *Concrete support for companies*

First of all, it is important to know what kinds of support the enterprises need. The training should then be monitored by the external project sponsor, and the project sponsor should work closely with chambers, labour agencies, municipal councils and trade unions. The support services that have a positive effect on training for the companies as well as for the young people and trainees are in the first instance general information on the conditions and processes of training for companies providing training for the first time, guidance with regard to occupational profiles, and when needed the arrangement of such measures as “assistance during training” (*ausbildungsbegleitende Hilfen – abH*) and finally support in preparing for examinations.

### *Perspective “Finding trainees”*

#### ■ *School-business cooperation*

Close cooperation between school and enterprise is important so that school students can be acquainted with practice during vocational orientation. Both parties, the enterprises and the young people, thus have a better foundation on which to base their decision. This can considerably reduce the frequency of discontinuation of training.

#### ■ *External training management*

The most important factor for many SMEs in the context of opportunities for external training management is the choice of young candidates. It has been the experience of practitioners that SMEs are even prepared to pay for the selection of suitable young people, which shows how important this support is. Two major problem areas emerged in the discussion about finding exactly the right person for the job. On the one hand the problem lies with the young people and is often described with the buzzword “lacking the maturity needed for successfully completing a course of vocational training”. As far as the companies are concerned, they in turn often have imprecise ideas about their own needs and hence about what demands to place on trainees.

#### ■ *Introductory training for young people (Einstiegsqualifizierung Jugendlicher – EQJ) as a tool for filling training places*

About 60 per cent of young people who have completed EQJ go on to take a course of training. For that reason, EQJ should become a

regular tool of the Federal Employment Agency (BA). A network in the region is needed for all activities in the context of filling training places. It is also important that the project team should consist of qualified personnel. Qualified personnel, in turn, can best be found through networking.

*Perspective ■ Purpose, stakeholders and organisation of networks*

*“Using networks”* In the vocational education and training sector, thematic or strategic networks are generally formed to help and co-ordinate stakeholders and groups of stakeholders in creating transitions and solving concrete problems and hence in triggering regional developments. The stability of a network also depends on the organisational rules that the network adopts. The experience of the discussion participants has been that this is not so much a matter of funding or written regulations. A network is always only as good as the weakest link in the chain. This realisation is the basis for successful cooperation.

■ *Success factors for networks*

Successful networking begins with the commitment to common goals, since these are not necessarily always congruent with the individual goals of the institutions sponsoring the network. In the following the main objective is to build and establish supportive functions such as co-ordination and moderation. Other decisive factors in success are the joint learning of network skills, the establishment of a climate of trust among the partners and the cooperation of the network with other initiatives and stakeholders in the region as well as orientation on regional strategies.

At the end of the working group the participants formulated the following theses:

- We need intelligent, regionally controlled procurement of training places.
- That procurement has to be dovetailed with high-quality services offered to the companies.
- By means of the services offered, the existing resources and potentials should be optimally pooled and sustainably assured.

## No graduation without follow-up – Vocational education and training for persons with disabilities and disadvantages

Under the central question of how vocational education and training for persons with disabilities and disadvantages had to be put together and designed so as to be an integral part of the “regular system” of vocational education and training, the working group discussed the following questions in particular:

- *What possibilities of doing this are offered by the legal framework? Is there a need for amendments or additions?*
- *Are the learning venues and learning concepts adapted to one another?*
- *Do support concepts and support practice correspond to the goal of integration?*
- *What is being offered to persons with disabilities and disadvantages in the way of vocational qualification?*
- *What progress has been made in implementing the European Disability Action Plan “Equality of Opportunity for Disabled People”, including the Disability Mainstreaming Concept, in Germany?*
- *What does “inclusion” mean in theory and practice?*
- *What has been the experience in other countries? Detailed and concrete: What process is our neighbour Switzerland in at present?*

In the context of the discussion of the individual papers, the working group, with experts from the field of research, the federal and state governments, professional associations, vocational schools, education providers, the Federal Employment Agency and the social partners identified certain positive factors on the credit side of vocational education and training for persons with disabilities and disadvantages, but they diagnosed substantial deficits as well.

The establishment in law of the right of participation as well as initiatives and projects such as the European Disability Action Plan and its national implementation were deemed to be successes. Progress was noted in the sphere of qualification opportunities and also in the sphere of job opportunities (e.g. farmed-out workplaces as an alternative to work in workshops for the group of persons concerned).

It was critically observed that the much-touted paradigm shift from (patronising) care to self-determined participation has not (yet) taken place to the desired extent. In this connection, there was criticism of the discrepancy between the desideratum and reality, especially in the implementation of the right of participation.

The following points were cited further as problem areas: The training of persons with disabilities and disadvantages too often takes place in occupational fields with unfavourable labour market prognoses. These groups of persons are still disproportionately affected by unemployment. There is a lack of critical monitoring by researchers, who tend to adopt a “legitimising” role. In the field of placement in schools, the result of the lack of capable personnel is that adequate special needs education-qualified vocational teaching often just does not happen. The testing procedures in aptitude testing as well as vocational or training counselling generally are often inadequate; there are deficiencies here in terms of the qualification of counsellors and the testing procedures applied. Not only the groups of persons but also some of the occupational spheres in which these groups are predominantly “accommodated” suffer from stigmatisation in some form. The scattering of responsibilities often makes it difficult both to obtain a general picture of the situation and to find pathways to adequate individual qualification. Conclusion: Owing to the problems that exist, qualification is often a stroke of luck.

In connection with the discussion of what has been achieved and what problem areas exist, the following “wishes” for the vocational education of persons with disabilities and disadvantages were formulated in the working group:

- Better quality at all levels and for all relevant spheres, from the personal budget through the teaching and training staff, the training regulations and opportunities in general all the way to diagnosis. More information and counselling of companies, which are important learning venues precisely for persons with disadvantages and disabilities.
- Consistent implementation of the approach associated with the term “inclusion”, that is, inclusion of the interests of persons with disadvantages and disabilities in all deliberations, all planning and all decisions as the natural thing to do, was

formulated specifically as a “priority” wish. It was considered necessary to have integrated solutions in the sphere of vocational education as well, rather than promoting segregation and channelling people into blind alleys.

The working group arrived at the conclusion that the scattered responsibilities in the field of the vocational education of persons with disabilities and disadvantages were problematic and called for co-ordination and harmonisation. The quest for a suitable “co-ordinating agency” led to the insight that it would be hard to name one, quite apart from the question of “authorisation”, and that it would therefore be the task of all the stakeholders involved to promote harmonisation and co-ordination.

In the past decade, the fact that the scope for shaping the hitherto relatively rigid occupational concepts has been substantially broadened has been an important factor in promoting the willingness of companies to provide training. Configurable training regulations were intended to facilitate the flexible integration of industry-specific and region-specific skills needs and rapid reaction to rapidly changing qualification requirements. The procedures for restructuring training occupations were accompanied by corresponding pilot projects. The results and prospects of the approaches worked out here were discussed in the following working group.

### **Flexibility and configurability – Elements of a pilot project programme**

Configurability as a central element in the flexibilisation of vocational education and training contributes substantially to the continuous modernisation and development of the dual system of vocational education and training. This new concept represents a paradigm shift in the formulation of training regulations in vocational education. The preconditions for this were provided by the “Vocational Education Reform Project”. It was adopted by the Federal Cabinet in April 1997 and was seen then and is seen now as an important step towards the modernisation of vocational education and training.



The pilot project programme “Scope for flexibility for initial and continuing education”, operating throughout the country with its 28 individual projects, is making an important contribution to this by contributing in practice to the implementation of the “configurability” concept. At the same time, it has a modifying influence on the scientific discussion and the shaping of vocational education policy through continuous evaluation and transfer of results and experience. Cross-border cooperation with other European projects and institutions has initiated a transnational dialogue on flexibility and configurability.

Selected results of these pilot projects were discussed in the working group. One important result to be noted is that configurability as a variant of flexibilisation in vocational education and training has contributed substantially to the continuous modernisation and further development of the dual system of vocational education and training. It has been taken into consideration in the restructuring processes during the last ten years and continues to prove its worth. Nevertheless, it is still not anchored in vocational education practices in all companies, vocational schools and inter-company training venues. With the active, systematic and targeted support of the stakeholders in the dual system of vocational education and training, the potential of configurable training to support a quantitative and qualitative development of vocational education could be much better exploited. This applies particularly to small and medium-sized enterprises.

The papers and the panel discussion confirmed these ratings and provided an insight into the concrete project work, project networking, transfer, and effects on practice, research and policy. The programme sees the pilot projects as an important tool for configurable vocational education and training, integrates transnational dialogue, and establishes the link to science and its integration into occupational pedagogic practice research. It became clear that occupational pedagogic action research posed a special challenge to researchers. They are playing an increasingly important role in the research and development process, for instance by working out concepts and monitoring, evaluating and reflecting as well as moderating their implementation and supporting transfer.

It was pointed out in particular that a close connection needs to be established between research and structuring and policy-making. This needs to be supported by a permanent dialogue and by accompanying intervening or responsive research that intercedes in the process of daily practice. The working group ended with a panel discussion on “Vocational training in the process of change”, the findings of which can be summed up with the following quotation:

“With the pilot project programme ‘Flexibilisation...’ a structuring offensive has been added to the trend in training that has been quite deliberately introduced through the restructuring of occupations. We have tried to enable those practicing in the field to apply the new concepts that are part of the training regulations. If one looks at the different approaches in this pilot project programme, with over 20 projects, one will see how complex the landscape is, how flexible training has to be to accommodate the aspirations of the different regions. That is where the value of a pilot project programme lies: that when one has identified such a major development trend, one supports it actively.” (Peter Munk, BMBF).

Three points can be mentioned as a synopsis of the working group:

- The breadth and diversity of the flexibility pilot programme has generated a new quality of vocational pedagogic action research and a new understanding of transfer.
- Configurability is the basis for a paradigm shift in vocational education and training.
- Vocational pedagogic action research as the foundation of the work contributes to enabling companies for these processes and leads to a new culture of training.

The close interlocking of initial and continuing education and training and progression to university-level courses of education is crucial for the future attractiveness of the dual system of vocational education and training. The possibilities of access required for this have been opened up in particular by the development of a compatible continuing education system in the IT industry.

## **Developing vocational skills – Job Process Oriented Continuing Education and Training**

The complete continuing IT education and training system was developed consensually in or with the BIBB and the social partners in the early 2000s with the involvement of the Fraunhofer Institute ISST Berlin and has been on the market since 2003. Intended as an additional qualification tool for an unmet demand for skilled IT workers and management personnel, the start of the system corresponded with the so-called Internet bubble, so that there was no demand for qualification in the IT industry at that time. Thus the continuing IT education and training system did not have the expected quantitative effect. Nevertheless the professional associations in the industry and the trade unions see the first establishment of work process oriented continuing education in the IT industry as a successful model that can be transferred to other industries as well.

The innovations in the new continuing IT education and training system, such as specialist certification under ISO 17024, the possibility of specialists advancing through operative to strategic professionals and qualification through work on a real assigned project have found acceptance and are seen as a tremendous advantage by those involved. The results of the first practice phase and the evaluation carried out by the BIBB led to initial changes, among them the prolongation of the recognition of acquired specialist certificates, the bundling of specialist profiles and the tightening of written test requirements.

Technical developments and the concomitant gradual change in the organisation of work have led the social partners in the electrical industry, in mechanical engineering and in microsystems technology as well to develop and expand new qualification and career paths for their employees. The continuing IT education and training system with its learning in the process of work and “diagonal careers” approach served them as a model.

The new continuing education and training system in microsystems technology has been formulated and decreed by law in accordance with the Vocational Training Act (BBiG). It has been “in operation”, i.e. applied in practice, since 2007.

The continuing education and training in mechanical engineering is currently being developed by the BIBB and the social partners together with experts from company practice. The goal is to begin implementation in 2008. The preliminary conceptual work for a new continuing education and training system has been completed in the electrical industry, and the development phase should be completed by the end of 2008. One substantial change to the continuing IT education and training system is the abandonment of binding certification of each specialist profile under DIN ISO 17024 (the first level of qualification). Instead the procedure of competence determination was or is left open here and only substantive stipulations are employed.

Progression to university-level studies or university graduation is still a difficult proposition. The incentive programme of the Federal Government presented in the working group – ANKOM (crediting of vocational skills) – is an attempt to find and test effective solutions, including those that extend beyond the IT sphere. The programme has already resulted in the universities making the first changes towards generous accreditation of vocational skills. There are fears that the commitment of the higher education establishments will recede when the incentive programme ends at the end of 2007, since the current problem of dealing with the “excessive load” of university places has a higher priority for the universities now and in the medium term.

Without detracting from the debate on progression from initial and continuing vocational training to university, the wish was formulated in the plenary session that more be done by the federal government and those involved to promote recognised and still successful continuing vocational training, for example the foreman’s certificate. In the last few years, new profiles and/or new content have been developed, such as the new certified mechatronics foreman and/or the even stronger action orientation in the case of individual examination subjects.

On the question of progression to university and/or the acquisition of the bachelors/masters degree the social partners were unable to agree on the proposal to introduce a bachelor’s professional degree for graduates of continuing vocational education and training.

The example presented of the AV media industry made it clear that there was a lack of clarity as to how the university bachelor's degree was to be classified in relation to graduates of the dual system of training as an audiovisual media designer – as equivalent, or as non-equivalent, since vocational experience is lacking?

When final examinations in continuing vocational education and training were compared with certification systems outside of vocational education law, there were some interesting elements of competence determination. No clear-cut advantages of the methods presented over examinations under the Vocational Training Act were seen. BITKOM, VDMA and ZVEI are pioneer associations with regard to European activities in the field of vocational education and training and have prepared a proposal for a sector qualifications framework that refers to the structures of the new continuing IT education system as well. The working group was unanimous in the opinion that both the European and the National Qualifications Framework offer an opportunity for more transparency and permeability in the qualification and education sector.

The representatives of the employers' associations and the trade unions also spoke out unequivocally in their papers and in the discussion in the working group against the modularisation of occupations. They continue to adhere to the occupation-based approach to initial and continuing training ("Berufskonzept") and fear that a module-based approach would lead in the wrong direction. The new vocational profiles in the IT and metal/electric occupations give the companies sufficient opportunities for flexibility and the integration of specific company processes.

It was critically observed that the establishment of the new concept of work process oriented continuing education and training was not something that would proceed automatically and that it called for new thinking on the part of the stakeholders. The stakeholders are, in addition to those directly affected, in particular the company personnel department and the works council. It takes time to introduce radically altered continuing education concepts. Experience in establishing the new continuing IT education and training system has shown that additional concomitant measures

such as external coaching, counselling, training of multipliers, and the production of new teaching and testing materials are needed in the introduction phase.

Discussions of quantitative and qualitative problems of vocational education and training usually lead to the question of the funding of vocational education. The working group on funding models for initial and continuing vocational education and training should give new impetus to the current discussion with an eye to the funding models in the neighbouring European countries.

### **Thinking outside the box: Funding models for initial and continuing vocational education and training**

In initial vocational training, dependence on business cycles and single-company funding is seen as an important reason for the constantly recurring crises in the apprenticeship market. Government apprenticeship programmes and incentives for company training places reduce the pressure of the problem temporarily, it is true, but they signal the companies that they can back out of their responsibility for training. In neighbouring countries with comparable dual forms of training, some inter-company fund financing models are practiced, but in Germany questions of fund financing for vocational training have so far ended in decade-long controversies and mostly fruitless debate. Experience with that fund model for financing vocational education and training in the neighbouring countries was the subject of the working group “Thinking outside the box: Funding models for initial and continuing vocational education and training”.

With regard to initial vocational training, it had to be borne in mind that in most EU Member States it takes place in school form and is government-regulated and government-funded. In-company vocational training comparable to the German dual system of education and training is found only in Denmark, Austria and Switzerland. There, however, in addition to single-company funding, there are also inter-company fund models of training financing, and these were presented in the working group.

In the last reform of the Vocational Training Act in Germany in 2005, the question of training financing remained exempt from statutory regulation, but the new Vocational Training Act (BBG) in Switzerland, which came into effect in 2004, provides for the possibility of the Bundesrat (government) declaring the vocational training funds of organisations of the world of work (professional associations), if requested by those organisations, as generally binding for an industry sector.

As organisations representing the interests of the companies, the professional associations assume vocational training tasks themselves in that they offer vocational education courses, for example, or training documents for the companies. The funds are used to finance such offerings. So far twelve industry-related vocational education funds have been declared generally binding. On the whole, experience has shown that this also places financial responsibility on companies that have not hitherto shared in training costs but have profited from the training efforts of the industry sector. It is true that attention was drawn to problems here too. For example, companies in different sectors of the economy have tried to evade their funding responsibilities. These are isolated cases, however. One predominant question in the discussion was how Switzerland managed to get employer organisations to assume social responsibility for vocational education and training. Another central question in the discussions was whether the introduction of the funds had helped increase the number of training places offered.

Wage and salary disputes aside, there is a long tradition of cooperation in vocational education and training between labour and management in Denmark as well. Here as well, the companies in a given industry participate in the funding of vocational training by paying an amount proportional to the number of employees they have into a common fund administered by the employer organisations and trade unions and used, for example, to pay apprentices their allowances.

In continuing vocational education and training, unlike the dual training system, there is no country-wide organising principle in Germany. Institutional segmentation of continuing vocational education and training into continuing company training, continuing

individual training and continuing training for unemployed persons leads to different forms of continuing education funding, depending on the sub-segment, in which companies, participants in continuing education or the state – primarily in the framework of its labour market policy – cover the cost of continuing education and training.

In addition to the promotion of continuing education for unemployed persons, which has been substantially reduced in recent years, the state promotes participation in upgrading training, especially among those with rudimentary qualifications. This government support focuses primarily on funding instruments intended to heighten individual demand in the continuing education market. In one paper the experience with these demand-regulated funding instruments was termed to some extent “sobering”, with particular reference to the education vouchers in South Tyrol and the learning time accounts in Britain. The education cheques in North Rhine-Westphalia, on the other hand, designed to promote continuing education and training in small and medium-sized enterprises, were seen as positive.

The collective funding instruments in Denmark, France and the Netherlands were cited in individual papers as a possibility of involving the enterprises, regardless of the continuing training activities of the individual companies, in continuing education funding to a greater extent.

Experience in France has shown that the continuing education financing fund based on a company levy is seen by the enterprises as advantageous and is aggressively used. In particular, it prevents employees from using lack of money or time as an excuse for abstaining from continuing training. Another advantage is that the control of the continuing education and training process through the continuing education fund also makes it possible to take the higher-ranking targets of the industry or the region as well as the socio-political and social goals of continuing education into consideration.

In the Netherlands, the discussion about the pay scale fund financing systems in the different industries has flared up again. For



example, there is discussion about the extent to which the continuing education and training of employees should be paid for through the industry fund if they switch industries after their training. Whether the fund should also be used to meet financing needs in other areas of public service is also being discussed.

For Denmark, there was a presentation of the fund financing based on collective agreements linked to the labour market policy Flexicurity Concept, which focuses on employment security and not on job security. It includes arrangements for release from work for continuing training, whereby the problem that has to be dealt with here as well is that additional continuing training incentives have to be given to those with rudimentary qualifications so that it is not just those already qualified who take part in continuing training ("segmentation circles").

There have been few industry-specific fund arrangements in Germany up to now. Those that have been made were in small and medium-sized enterprise structured industries. Studies have shown that they help relieve the financial burden on enterprises active in continuing training. It is important for labour and management to be able to discuss future qualification needs and suitable continuing education and training measures. All in all, the application of collective agreement prescriptions has generated little conflict, but still the funds raised are said to have been modest, the number of employees and companies that have been able to take advantage of the collective agreement small, and the effectiveness therefore limited. Moreover, it has hardly touched the company vocational training scene.

In the concluding discussion, the employer side pointed out that there was no place in the collective bargaining institution for agreed arrangements on continuing education and training. The question came up in the plenary session as to what other approaches to a solution could be offered by business as an institution of society to prevent an undersupply of qualified training opportunities for an ever growing portion of the working population, especially since individual workers are often unable to muster the resources and time for continuing education and lack a general view of the market.

The following points can be mentioned as a synopsis of the working group: Inter-company forms of funding for initial and continuing vocational education and training are nothing unusual in other countries. Their primary goal in initial training is to improve the quality of training and to bring about a more balanced distribution of training costs among companies that provide training and those that do not. In continuing training, financing funds have increased the participation of companies and employees in continuing training.

All the same, there are still problems with educationally disadvantaged groups and discussions about the use of the funds for other areas of public service. In Germany we have seen that continuing education and training activities can be promoted at the company level through stipulations in collective agreements and framework conditions and that conflict log-jams can be broken up. All the same, conflicts of interest between labour and management prevent the large-scale introduction of collective bargaining arrangements for financing continuing education and training.

## Outlook

The discussion in Forum 1 showed that there is a need for fundamental structural reforms in the vocational education and training system. The proposals in that regard, however, were controversial. There were demands for more flexible adaptation of training occupations to labour market requirements with shorter training times, on the one hand, and on the other for breaking with the policy of developing short-term occupations and instead identifying European core occupations and “families of occupations”.

It was unanimously agreed that the chances of progression from the vocational education and training system to the university system had to be systematically improved in the short term and fully realised in the medium term. For that purpose, it was felt that the in part insular sub-systems of vocational education and training had to be made more permeable. In addition, the dual system of education and training had to be seen to a greater extent as an integral part of the general education system. Through the pro-

motion of supplementary qualifications and dual courses of study, the interlocking of initial and further training and of vocational and university education and the equivalence of vocational and academic training courses that was now on the agenda had to be accelerated. This had to include chances of “uncomplicated” catch-up qualification, on the one hand, and on the other there already had to be controls in the school system to ensure that there was no premature selection between aspirations to vocational and university educational pathways.

In addition to these structural reforms to increase participation in education and better adapt vocational training to the labour market requirements, the challenges were dealt with that make a revision of the curricula of vocational training courses necessary. The goal had to be to let the content of training be guided in the long term by such guidelines as resource and energy efficiency, closed loop recycling management and sustainability.

# Forum | 2

## **Initial and continuing education and training: New structural concepts and innovative developments**

Coordination:

*Martin Elsner*

*Harald Schenk*

- Identification of skills needs and their relevance for regulatory activities
- New technologies and organisational models as stimuli for occupations
- Structural development in vocational education and training
- Consequences of European education policy for regulatory activities
- Process orientation in training and testing
- Advanced training occupations for teaching staff

## Forum 2

### **Initial and continuing vocational training: New structural concepts and innovative developments**

The organisation of initial and continuing training occupations based on the consensus principle is one of the core tasks of the Federal Institute for Vocational Education and Training. The tasks are performed against the background of general conditions for the regulation of vocational training that are currently undergoing profound changes. As a consequence of information technologies, globalisation and the pressure of competition, enterprises are constantly adapting their structures, services, products and production processes to a changing environment.

Forum 2 took up these requirements and dealt extensively with current developments in vocational education and training with reference to the revision of initial and continuing training. The Forum discussed in plenary session the current structural concepts and evaluated the consequences for vocational education and training against the background of the European reflections on the creation of a common education space. In the process, new models for structuring vocational training and making it more flexible were presented and discussed and the question of the extent to which they can be made to harmonise with the principles of the occupational concept was pursued.

The working groups of Forum 2 covered all the activities of the BIBB in the context of regulatory work. In doing so they gave their attention to the core regulatory processes: qualification research and/or scientific early identification, which provide the requisite insights for shaping sustainable and viable job descriptions, further the development of the regulatory resources themselves including the testing system and the demands on innovative evaluation procedures. The consequences of European education policy for vocational education and training were another topic, and approaches to professionalisation for training personnel were presented and discussed.

In the working groups, the Forum dealt intensively with the identification of foundations and their relevance for regulatory activities, and especially with concrete examples of research, sectoral vocational training circles, and occupational groups.

It became apparent that it is necessary and useful in the interest of both quality assurance and demand orientation in vocational education and training to channel the most comprehensive possible scientific findings on changing qualification needs into the process of revision and modernisation of job definitions.

Another subject area of one working group was the extent to which new technologies and organisational models provide a stimulus for occupations and their definitions. It examined the effects of the transformation in the world of work on innovations in the occupations. Apart from the overall context, concrete examples from the call centre field, logistics, sports, banking, the media, construction and real estate, and automotive, machine and plant engineering showed how diverse in content the developments are.

In the working group on “Structural development in vocational education and training”, a new model for training in commercial careers was discussed in the context of Austrian and Swiss vocational training and of new approaches to vocational education and training (office occupations, retail trade, and personal services) such as occupation families and tiered credit courses of training.

The consequences of current European trends for German vocational education and training were discussed in the “Europeanisation/internationalisation/transparency” topic area. Various dimensions of such topics as the European Qualifications Framework (EQF), Europe modules, credit points (ECVET) and cross-border collaborative training were illustrated by specialist reports and current project examples and discussed in a panel of national education experts.

The “Process orientation in training and testing” thematic block dealt with various forms of process orientation in training, examination structures and methods, and skills standards and diagnosis.

Another thematic block dealt with the advanced training occupations for the teaching staff, with their needs, with the various occupation concepts and with internationalisation in this field.

## **Occupation-based approaches – Present state and prospects for development**

The plenary session where the theme of the Forum was introduced unfolded the chances of a modern occupation principle. The resolution of the German Bundestag that accompanied the revised Vocational Training Act (BBiG), which came into force on 1 April 2005, made it clear that the legislator wanted vocational training according to the Vocational Training Act and the Trades and Crafts Regulation (HwO) to be seen as training according to the occupation principle. Vocational training in government-recognised training courses lasting several years guarantees the possibility of undertaking a multitude of concrete activities.

There is a basic consensus among the stakeholders in the vocational education and training system on being guided by the occupation principle. The economy requires competent skilled workers who can cope with the increased demands in a globalised society. But above all, vocational education and training in the dual system means the possibility for young people to learn an occupation, that is, to attain a high level of qualification and a good starting position in the labour market. It should not be forgotten that an occupation performs a social integration function and contributes to character development.

The range of opinions about what a modern occupation principle should look like in a world of work that is constantly changing is broad. According to the 25 October 1974 resolution of the Federal Committee for Vocational Education and Training, which is still valid, the following are considered criteria for the recognition of training occupations:

- sufficient demand for the corresponding qualifications that is not limited in terms of time and not dependent on individual companies;
- training for qualified, responsible activities over as broad an area as possible;

- designed for lasting vocational activity not dependent on age;
- broad-based basic vocational education and training;
- possibility of an ordered course of training;
- sufficient delimitation from other training occupations;
- operationalisability of the training targets;
- duration of training between two and three years;
- foundations for continuing education and vocational advancement and
- acquisition of the ability to think and act independently in applying one's skills and knowledge.

This catalogue of criteria can be accepted in principle. In the practice of revision, however, these standards will on occasion be interpreted broadly and occupations will be created that will have limited permeability and transferability in the labour market from the outset.

Against the background of the continuing crisis in the training place market, despite the good figures for the 2007 training year, and the steadily rising number of young people who waste valuable time in the so-called wait loops, it is time to think about new models for organising training without calling the basic principles of the dual system into question. The proposal of Professors Euler and Severing<sup>1</sup> for arriving at flexible training pathways in vocational education and training triggered an especially vehement debate and at the same time stimulated further and more far-reaching developments.

The occupation principle has come under criticism, particularly in connection with reflections on the creation of a European Education Area with a uniform qualifications framework (EQF) and the introduction of a credit system (ECVET) to promote the progression and mobility of citizens. Other aspects of the discussion were the argument about the modularisation and skills-based (outcome-oriented) direction of training schemes, the certification of partial qualifications and the possibilities of granting credit for what has been learned outside the formal education and training system.

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1 Euler, Dieter; Severing, Eckart: Flexible Ausbildungswege in der Berufsbildung. Nuremberg, Sankt Gallen, September 2006; cf. also: Frank, Irmgard; Hensge, Kathrin: Ausbildungsbausteine – ein Königsweg für Strukturreformen in der Berufsbildung?, in: BWP, issue 2/2007, pp 40 ff (available on the enclosed CD-ROM).



In the plenary session, representatives presented their ideas about the further development of vocational education and training. Another paper was devoted to the practice introduced in 1997 of formulating the general KMK (Standing Conference of the Ministers of Education and Cultural Affairs) curricula, structured according to learning fields, on the basis of skills and certificates.

Then the major changes in the Vocational Training Act (BBiG) for the organisation of vocational education and training were identified.

The goal of the plenary session was to explore the possibilities of a modern occupation principle and to provide an impetus for the future shaping of vocational education and training.

### Findings of the plenary session

#### ■ Occupation principle as foundation

The occupation principle is the foundation for the restructuring of vocational education and training. The flexibilisation potential of the dual system of vocational education and training is far from exhausted, however. The occupation principle can be a guide to action in creating European education programmes as well. The system of education or vocational training should evolve from an education reservoir to an education expansion system in order to make the society viable. The education or vocational training system has to create the preconditions putting people in a position to learn all their life long, to expand their knowledge and skills, and to respond flexibly to changes in their occupational as well as in their private sphere of activity.

#### ■ Qualification-related description of regulatory tools

In the context of a European Education Area, it is necessary to describe regulatory tools as they relate to qualifications. It will also be a matter of exploring the flexibility potential of the dual system so that it does not lose ground in the growing competition with universities, technical colleges and bachelor's degrees.

### ■ Possibilities of influence through new BBiG

The 2005 revision of the Vocational Training Act, with graduated training, supplementary qualifications, changes in the examination system, trial arrangements and the goal of acquiring the capacity for comprehensive vocational action, has shown us ground-breaking possibilities of influencing vocational education and training that ought to be utilised and tested.

Some have since been taken into account in the ongoing regulatory business. Other changes and innovations, in graduated training and supplementary qualifications, for example, are still waiting to be implemented. Whether this happens and when will depend on the employers and trade unions.

### ■ Equivalence. Overspecialisation. Europe: Competence-based learning field concept as a formula

The learning field concept of the Standing Conference of the Ministers of Education and Cultural Affairs with skills in the form of minimum standards sets the course in the direction of consistent output control for occupation-related instruction in vocational school. It turned out as a research desideratum that a thorough evaluation of this concept had not yet taken place. A consistent formulation of competence-oriented vocational standards was identified as an approach to a solution for instruction in the full-time vocational schools as well. With it, a claim to equivalence between vocational training and the school entitlements acquired there could be plausibly substantiated. The development of standards for occupational “domains” could lead to the streamlining and systematising of occupational requirements and thus support the present trend in the federal and state governments, management and labour against over-specialisation in vocational education and training. On the basis of the comparability of underlying concepts, such standards could be formulated so as to be compatible with the European and/or German qualifications frameworks and thus facilitate the grading of vocational skills. The further development of training modules could also be supported through such an approach.

## Identification of skills needs and their relevance for regulatory activities

The purpose of the working group was to acknowledge the importance that skills research has in the process of revising initial and continuing training occupations.

It turned out that through systematic monitoring of the labour market at regular intervals (screening) it was possible to avert imminent imbalances between the demand for and the supply of qualifications (mismatches). Through the feedback of the results of prognoses or radar findings in industry dialogues, for example, the acceptance of the results can be significantly increased, and that in turn further increases the relevance of skills development research for regulatory work. It is important, however, for politics and the social partners to become involved in this research process.

Occupational science skills research is an essential basis for innovative curriculum development. Its methods include in particular:

- expert/skilled labour workshops in which the current characteristic occupational tasks are compiled,
- work process studies through which workplace-related peculiarities are recorded and balanced out,
- comparison of regulatory instruments to determine where they overlap and where they differ, and
- management workshops that provide a forecast of technological and organisational developments in the sections and the manufacturing sectors.

Occupational groups and sectoral vocational training circles, as early links between the acquisition of findings and the development and implementation of vocational education policy measures, can also be meaningfully used for systematically compiling and assessing scientific findings in the run-up to regulatory activities. The transfer of results, preparing the information acquired so that it will fit the aims and purposes of a multitude of different (user) groups, is of crucial importance in this regard.

The working group dealt extensively with the presentation of current projects in the field of skills needs and skills development re-

search, carried out not just by the BIBB but also by other research institutions and universities. These examples related not just to commercial and service occupations but to trades and technical occupations as well.

It turned out that new jobs do not emerge from one day to the next, so long-term systematic monitoring of activities (below the level of occupations) on the basis of representative polls of employed persons can very well be an excellent source of knowledge about future skills requirements. Surprisingly, what we currently see is the parallel existence of rising and falling skills demands. The reasons for that are the increased complexity of training content, the decreased deployment of skilled workers in the direct assembly and manufacturing sectors, company economisation plans and changes in the organisation of work.

## Findings of the working group

### ■ Success factors for skills research

At the end of a panel discussion among (specialised) policy-makers, the floor was turned over to “users” or intended recipients of these scientific findings, such as the representatives of the federal government and of management and labour who, within the requisite decisive or consulting bodies, decide on the implementation and application of these research findings in practical regulatory work. It became apparent that skills research can very well make a crucial contribution, and one that the political stakeholders take into account, to the revision and modernisation of initial and continuing training occupations. The precondition, however, is that at least the following success factors are present:

- a competently formulated assignment,
- adequate endowment of the research project, making sure of the expertise and methodological competence of the researchers carrying it out and seeing that they are anchored in the field,
- a work process that can be carried out on the basis of a common target orientation and free of non-research interests,
- a consensus of all those involved concerning the most important sub-targets as well as, in the end, in the formulation of recommendations and

- the imagination and courage both to not interpret the modernisation mission too cautiously and to take the experience the stakeholders bring into the field seriously.

## **New technologies and organisational models as stimuli for occupations**

Profound changes in the world of work pose great challenges to vocational education and training. New technologies, changing company structures and ways of organising work as well as professionalisation tendencies are expanding, reducing or shifting occupational content and activities. But more and more, complex interrelationships between “hybrid” skills requirements can be identified in the occupations. To safeguard the occupations system, it is essential to adapt and modernise the content and structure of occupations and occupational content and to develop new occupations. The influence that processes of change in the world of work have on vocational education and training and how vocational education and training has reacted or needs to react to changing skills requirements was the topic of Working Group 2.2.

The discussion was mostly about clarifying the different substantive dimensions of those adaptation and development processes and about the possibilities of influencing the content and structure of occupations. The chosen examples of the most widely differing developments in occupational content from different industries were assigned to the following thematic areas:

- New industries – new occupations,
- professionalisation processes,
- new content of vocational qualifications,
- networking of service and production work and
- new technologies

and were thus meant to illustrate the current range of modern vocational education and training requirements.

The introductory report gave a comprehensive introduction to the theme: Transformation of the world of work – Innovations in the occupations. The speaker explained the relationship between

economic growth and education at the macro-economic level and drew the conclusion for the current labour market situation that “brain runtime” is more important today than machine runtime.

The speaker expressed his opinion that the changes in occupation requirements, documented by a series of current studies, do not, however, justify the discussion about the end of the occupation-based system. Despite the massive need for reform, the occupations have not become less stable. Solutions adapted to the peculiarities of the German education system are also needed in the current discussion about higher university graduation rates, especially in comparison with other OECD countries.

The variety of occupational developments was illustrated by a series of examples from actual practice. All the practice examples were oriented on whether or not the solutions developed up to now were evaluated as successful and/or sufficient for modern vocational education concepts and how experience could be made fruitful for comparable developments.

## Findings of the working group

### ■ New industries – new occupations

For the thematic complex “New industries – new occupations” the example of the call centre industry was used to show how changes in the organisation of work combined with the use of the latest technologies had led to changes in occupation requirements and in the end to new occupations.

### ■ Professionalisation tendencies: logistics and sport

Different professionalisation tendencies were identified for logistics and the sports sector that led to new qualification and skills requirements in existing occupations, and in part culminated in new occupational profiles as well, therefore affecting the overall structure of the occupations in those two sectors. However, it was in logistics in particular that broader discussion of skills development and its codification in the occupational profiles was insisted on.

### ■ The media industry

In the media industry, content generation is an example of a new component of vocational qualifications that – as far as can be foreseen on the basis of current studies – will not lead to the devaluation of vocational requirements in other occupations that already exist.

### ■ Networking of service and production work

The explanation of the elements of energy contracting drew attention to a trend that will have a stronger influence on the future organisation of vocational training as well: the progressive networking of service and production work with the requirements profile of the “all-rounder”.

### ■ Tug-of-war between virtual and concrete action

On the new technologies thematic field, the concepts of “virtual reality” in mechanical engineering already developed were used to show how extensive the new dimensions of occupational requirements will be in the tug-of-war between virtual and concrete action.

## Structural development in vocational education and training

In the past, the path followed in regulatory policy has been one of an increasingly extensive sector-specific definition of the occupation-based approach to initial and continuing training. The limits of the occupational mobility that needs to be guaranteed as well as of the practicability of such an approach, however, are now apparent, since it is becoming increasingly difficult to ensure in-school training. Modularisation strategies were proposed as possible solutions, some with the intention of retaining the “occupation” and other, more radical models meant to break up the traditional job descriptions into modules.

The working group dealt with structural development in vocational education and training in four thematic blocks. The example of commercial/business service occupations was used to try to project a model for commercial education and training and, proceeding from that, to identify future core skills and integrative approaches

to commercial vocational training. A glance beyond the borders of Germany to Switzerland and Austria was interesting in that regard.

These cross-border model discussions on structural aspects of vocational education and training were followed by more implicit approaches to the development of the existing occupational concept. Office occupations that are at the core of commercial vocational training and are already found in all sectors as transversal occupations were used to illustrate the possibilities of giving occupational profiles a flexible and open structure as a way to satisfy the different sectoral requirements and halt the trend towards further splinter occupations and industry-specific occupations. The formulation of new occupational profiles is intended as a vocational education and training policy to making two-year courses of initial vocational training feasible for disadvantaged young people.

Problems with the transition from two- to three-year training increasingly arise in connection with the increased number of graduate credit courses of training created. Retail trade practices have led to more critical points as well as to interesting approaches to improving the situation. The new service occupations in the retail sector use an integrative system in an effort to improve permeability and support the process through self-directed learning that uses multimedia technology. This procedure could support the creation of graduate credit courses of training that is being stepped up by current vocational education policy. The new occupations in dialogue marketing and the dispensing and game machine business have to be given special thought here.

A digression into retail trade and salesperson skills development with the ProBE research project had to do with trainee problems resulting from their often being confronted in the initial phase of their retail trade training with tasks that as beginners they are not yet qualified to perform.

In the sphere of personal services, the latest product of the Federal Institute was introduced: the new training occupation of personal services clerk. The background, vocational structure and innovations were presented.



What became apparent here especially was a new structure of presentation of the content of Training Regulations that will place in the foreground the qualifications that give the course of training its profile.

### Findings of the working group

#### ■ **Research project: Service occupations in the commercial/economic fields**

The discussion between the principal stakeholders in vocational education and training about increasingly developing generalised concepts for concentrating the education and training landscape has been taken up through a research project of the Federal Institute, “Commonalities and differences of commercial/economic (service) occupations”. This could serve as an adjustment factor for the increasing splintering of the supply of training occupations while retaining the occupational concept. Research deficits were identified and research hypotheses and targets were formulated that are to be gone into in a future BIBB research project.

#### ■ **The Swiss “all-sector concept”**

In Switzerland, commercial training is structured according to an “all-sector concept”, and here too innovation requirements are discussed in the conflict area between the all-sector concept and industry-specific occupations. Initial partial results of a research project show that despite differing requirements a differentiated, flexible all-sector model can meet the needs of business.

#### ■ **“Modularisation” and occupational concept in Austrian vocational education and training**

At first glance, Austrian vocational education and training, which is two-pronged like the German system, seems to be trying to keep its system viable through “modularisation”. It turned out that the Austrian modularisation concept still provides for “integral courses of vocational education and training at the skilled worker level” and thus continues to adhere to the occupational concept. Differentiation of vocational training into basic, main and special modules makes alternatives to individual occupations possible, especially through the special modules, and maintains order in the occupations landscape.

### ■ **Updating office occupations**

More explicit goal-setting for training is needed with regard to the updating of office occupations in order to arrive at a decision concerning the design of the structure concept. The concepts of the social partners now being discussed both lump business and public service training occupations together. The background for this is the fundamental structural reflections of the Vocational Education and Training Innovation Circle of the Federal Ministry of Education concerning occupation groups that have had their first conceptual effects here.

### ■ **Permeability in graduate credit courses of training**

As a research desideratum, problems arose with the permeability of graduated two- and three-year courses of training. In retail trade there are initial approaches to improved permeability.

### ■ **Salespersons in retail trade**

After the presentation of important findings from the ProBe research project, recommendations were made for the revision of the Training Regulation.

## **Consequences of European education policy for regulatory activities**

Transparency and comparability of skills and qualification requirements on the basis of common standards is the key to creating a common education area in Europe. We have already passed important road marks on the way to achieving this. The development of the European Qualifications Framework (EQF) and the development or adaptation of national qualifications frameworks and standards connected with it as well as the introduction of a credit point system for vocational education and training (ECVET) are intended to ensure the transnational compatibility of qualifications acquired in other countries. At the same time, the discussion about models for granting credits across the boundaries of educational areas is a contribution to the equivalence of general and vocational education and hence to more permeability between vocational and university education.

The skills-oriented approach also underscores the importance of quality for measuring and safeguarding standards.

Subdivided into the thematic areas European skills standards and occupational profiles, International skills in training, ECVET and modular training structures and Cross-border (collaborative) training, the working group discussed the following question from various vantage-points: What are the consequences of the vocational education policy measures introduced at the European level for German vocational education and training?

### Findings of the working group

#### ■ **European skills standards and occupational profiles – Challenges for the regulation of training**

The development of vocational education and training in Germany can profit from European developments. More permeability, skills standards and a reorganisation of occupational profiles to reduce splinter occupations can be linked with European developments. Projects inspired in part by European vocational education and training policy, such as the development of the European skills standards of Volkswagen Coaching, however, also show the challenges to German vocational education and training when it is a question, for instance, of whether or to what extent integral occupational profiles should be retained.

#### ■ **International skills in training**

In an expanded Europe, it is becoming increasingly necessary to learn with and from one another. Apart from the exchange of trainees and education personnel with the goal of understanding other countries and cultures and learning foreign languages as well as acquiring occupation-related skills, this development goes in two directions: On the one hand the experience in development work on European projects is reflected back into national education processes through transnational cooperation, and on the other the national work of revision in vocational education and training influences the work at the European level.

### ■ ECVET and modular training structures

The modularisation debate that has been going on in Germany for years has flared up again as a result of the ECVET development work at the European level. However, the German debate falls short of the mark. It overlooks the high degree of flexibility of the Training Regulations and the learning field concept. (Core) occupational profiles with skills standards geared to work processes are an alternative to a type of modularisation that is conceived above all as a segmentation concept.

### ■ Cross-border (collaborative) training

Cross-border learning venue cooperation schemes have as a rule been self-initiated; they have responded to the specific requirements of the labour market and business relationships. The collaborative training projects presently being, at least partially, sponsored through LEONARDO and JOBSTARTER thus basically demonstrate the practicability of the opportunities for vocational learning abroad offered in the 2005 Vocational Training Act. At the same time, project initiators active in the field are missing regulatory policy guidance for safeguarding their cooperative ventures in the long term. The recommendation formulated by the Vocational Education Innovation Circle (IKBB) to perhaps add “EU” to supplementary qualifications with a European/international orientation was welcomed as an option worth examining.

## Process orientation in training and testing

Process orientation has been the motto for work organisation and corporate structuring since the early 1990s. Taking their own particular business and working processes as a starting point, companies are increasingly focusing on process modelling measures and optimised process management with the aim of improving their cost structure and process quality on a lasting basis.

For employees, this opens the door to greater scope for participation and taking initiative in their companies; they are being assigned a key role in the optimisation of the overall production process.

The process-oriented training in the trade and technical occupations that this entails demands an increasing sense of personal responsibility on the part of the trainees. Process oriented training is expected to bring about a better learning climate and greater motivation on the part of trainees and trainers. The challenge to the trainers will be to support and to challenge the trainees in ways appropriate to their level of development. Learning in the work processes should take place primarily in the process of work itself. The trainee is given an assignment, takes over the planning and implementation and is involved throughout until the “real assignment” is completed.

When the metal and electrical occupations were revised in 2003 and 2004, the process-oriented approach was explicitly mentioned in the Training Regulations. Process-oriented examination methods place a complete vocational activity in the context of the company processes and fields preceding and following it. The Training Regulation tends to set only tasks described in rather general terms. The content has to be concretised by the companies themselves. That facilitates the adaptation of training to company requirements and to rapid technical and organisational change.

## Findings of the working group

### ■ Final examination requirements

Gearing vocational training to business and work processes also affects the choice of suitable examination methods in the regulatory processes and influences how examinations are designed and structured. The following requirements for the final examination in particular can be deduced:

- Solving tasks and problems independently,
- developing autonomy in occupational action,
- judging processes, actions and results,
- shaping social relationships,
- acting responsibly,
- coping with tasks rationally and
- assuming social responsibility and displaying solidarity.

### ■ **Extended journeyman's/final examination**

Since 2002, the extended journeyman's/final examination model has been introduced and tested in 26 occupations, taking us a step closer to an examination conception that is geared more specifically to skills development. In the context of an evaluation, the Federal Institute for Vocational Education and Training monitored the process of introduction and implementation in the different industries. The initial findings of the evaluations of the metal crafts occupations and automotive occupations were presented and cross-sectoral conclusions were drawn. All in all, the representatives of examining practice as well as the trainees assess the new examination structure as very positive.

### ■ **Skills-oriented examination methods and assessment procedures**

The purpose of initial vocational training is to acquire the capacity for vocational action. Skills-oriented examination methods and assessment procedures are needed to measure it in a precise and meaningful way. Three factors in particular are considered especially important in the context of final examinations:

- An expansion of present types of examinations by the combination of behaviour monitoring, project documentation and technical discussion makes the integral measuring of capacity for vocational action possible.
- Outcome-oriented (skills and work process oriented) indicators guarantee a minimum amount of objectivity and comparability.
- Additional information from "third parties" increase the information value of the measurement and are not seen as detracting from its objectivity.

### ■ **Diagnosis**

The European trends toward comparability and transparency, international comparative studies such as PISA, including the current discussion about a vocational education PISA, and the discussion about quality development in the education system have increased the significance of the topic of diagnosis in the vocational field in recent years.

### ■ Skills-based structuring of Training Regulations

As a precondition for the measuring and assessment of skills in the final examinations, the Training Regulations must become skills-based. In particular, the concept of the meaning of skills in vocational education and training has to be operationalised and taken into account when describing occupational profiles in the Training Regulations. This should be brought about by cutting vocational action fields along the lines of company business processes. When the fields of action are described, a skills model could be used as a basis for formulating skills descriptions in which technical, methodological, social and personal skills are integrated.

## Advanced training occupations for teaching staff

In-company education services are increasingly the focus of attention of education policy. It is acknowledged today that their professionalisation has to be accelerated. Anyone who considers today's service landscape will discover a diversified service field in initial vocational training, continuing training and human resources development. In the last few years there have been a series of initiatives the aim of which is professionalisation in the field of occupational pedagogy for people working in this field who do not want to or cannot study. At the same time the vocational pedagogy studies offered at universities is coming under increased pressure. There is no guarantee of vocational schools finding recruits with vocational pedagogy qualifications. The growing field of self-employed trainers also needs more professionalisation. Vocational development pathways in the initial and continuing education and training services must be reconsidered with a view to ensuring new recruits, vocational development opportunities and permeability.

The goal of the working group was to discuss the situation and its challenges and to identify the needs for further development towards professionalisation of a service industry that is becoming more and more important for the German economy.

The topic was discussed in two blocks: In the first block, there was a stock-taking of company education services and their qualification requirements. After a thematic introduction, present situ-

ations in inter-company education centres, in vocational schools and in the trainer market were discussed. In the second block, the approaches to professionalisation for these services and their expansion were discussed.

## Findings of the working group

### ■ Professionalisation of company education services

The professionalisation of company education services in initial and continuing education and training has to be accelerated. Vocational development pathways must be reconsidered with a view to ensuring new recruits, vocational development opportunities and permeability.

### ■ Advanced training occupations for training staff

Advanced training occupations for training staff offered by the vocational education and training system are a promising path, as the first pilot trials show.

### ■ Interlacing the opportunities for education in vocational pedagogy offered by vocational education and universities

All in all, a system of qualification opportunities is needed to satisfy the demands for professionalisation for the diversified functions in initial vocational training, in continuing education and training and in human resources development, for teaching, counselling and managing. Interlacing the opportunities for education in vocational pedagogy offered by vocational education and training and universities would be useful for this purpose as well. A corresponding initiative has been launched in Mecklenburg-West Pomerania.

For this purpose, a vocational development pathway in teaching tasks at vocational schools should be opened up for trainers as well.

### ■ Part-time instructors in initial and continuing training

Those working part-time in initial and continuing vocational training should be given special attention since owing to their quantitative dominance they decisively influence the quality of vocational education and training. The growing field of self-employed trainers must be given greater attention as well.



### ■ Propagation of successful professionalisation approaches

Pilot trials and the propagation of successful professionalisation approaches for different target groups must be stepped up. This is linked with the call on education policy to support this.

## Outlook

The participants in the Forum agreed on the need for flexibilisation of the vocational education and training system in the framework of the occupational concept. The European trend towards more transparency, comparability and permeability in education works as a catalyst for a discussion that is going on in Germany as well. It is in the national interest to see the European trend as an opportunity for modernisation of the German vocational education and training system and its processes. Both a paradigm shift towards learning outcome orientation as well as one towards skills-based formulation of Training Regulations and the current dispute about the reduction of the number of occupations call for a structure discussion about the organisation of initial and continuing education and training occupations. The systematic identification of core skills in vocational training forms the basis for a focusing of the vocational education and training system through occupation families and occupation groups. Skills-based structuring of the Training Regulations is also a starting-point for skills-oriented modern examination methods and evaluation procedures.

Further negotiation and development processes will determine what forms of skills and work process orientation, of standardisation of competence measurement or of modularisation of qualifications can marshal a consensus and are practicable. In vocational education and training quality assurance, qualification research is an essential sub-process which, however, is subject to conditions for success that have to be safeguarded by those participating. In addition the further professionalisation of company education services must be promoted. The Federal Institute for Vocational Education and Training will continue to support this process strongly.

## Quality in vocational education

Coordination:

*Dr. Kathrin Hensge*

*Horst Mirbach*

- Training between quality and quantity
- Quality in continuing vocational education: Public-sector strategies and in-house strategies to foster customer orientedness and outcome orientedness
- Knowledge management as a contribution to quality development in vocational education and training
- People taking central stage: Personnel aspects of quality development in vocational education and training
- The legal aspect: Legal issues related to vocational education and training

## Forum 3

### Quality in vocational education

European integration and world-wide migration lead to intensified competition in the labour markets. The need to increase efficiency results in pressure to lower labour costs as well. This has repercussions for initial and continuing education. That was the backdrop against which the Forum delved into current quality assurance and quality development issues in vocational education and training as well as legal aspects of vocational training. First there was a discussion in a plenary session on the all-important question of who (or what) determines the quality of vocational education and training. There was a multitude of different approaches to quality assurance and quality development, but there was general agreement that learner orientedness had to be reinforced. Several thematic areas were discussed in greater detail in the working groups that followed: Quality and quantity in training, customer orientedness and outcome orientedness in continuing education and training, knowledge management and the demands on training staff, and various legal issues.

#### **Plenary session: Who determines the quality of vocational education? – Quality and the conflicting priorities of learner orientedness and expert knowledge**

The debate on the quality of vocational education and training is more topical than ever and is receiving special impetus from, for example

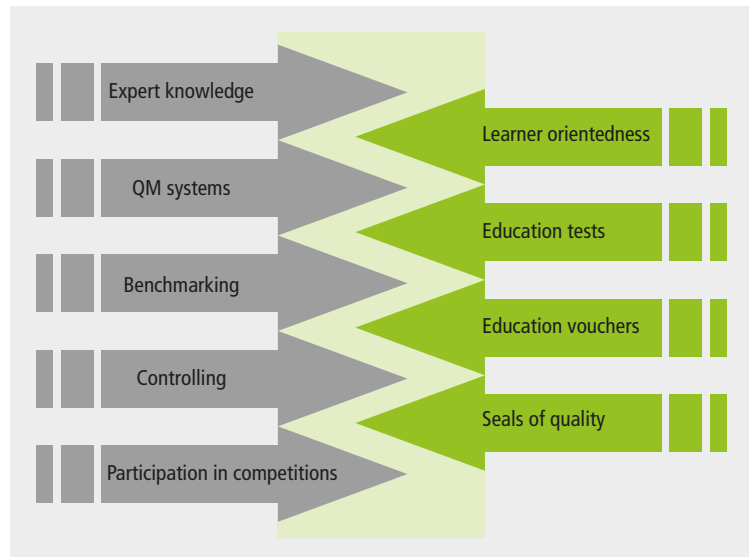
- the Bundestag resolution on the Vocational Training Reform Act requiring suitable instruments to be made available for ensuring the quality of initial and continuing vocational education and training (Bundestag Publication 15/4752 dated 21 June 2005);
- the Accreditation and Certification in Further Training Ordinance (issued by the Federal Ministry of Economics and Labour and the Federal Ministry of Education and Research, went into force on 1 July 2004);

- the quality framework for vocational training (issued by the IG Metall trade union in 2006);
- the increasing consumer orientation in continuing training and the education tests for improved information of those interested in education which were conducted in this connection (Stiftung Warentest consumer protection organisation).

This selection of quality assurance initiatives is enough to show that the discussion on quality assurance and economic efficiency has been heard in the vocational education and training field.

The dispute about quality assurance issues showed that the emphasis had shifted from the expert-oriented approach previously favoured to learner-oriented approaches. The two approaches, however, point in different directions.

**Fig. 1: Quality in continuing vocational education and training – development trends**



A factional dispute broke out about whether this polarity results more in an opposition or more in a supplementation in the sense of an interlocking of the different approaches, and this was discussed in the plenary session.

A wide spectrum of approaches was presented from different perspectives, such as

- treatment of the topic from the point of view of the target groups – individuals and their social environments,
- perception of the interests of women (female learning culture, gender suitability),
- promotion of consumer protection in initial and continuing training through information and counselling,
- concern with basic issues of evaluation (QSS, QSI and so on) and their contribution to the quality of training opportunities and training providers and
- consideration of training quality issues from the point of view of a united Europe (e.g. in the spirit of Good Practice).

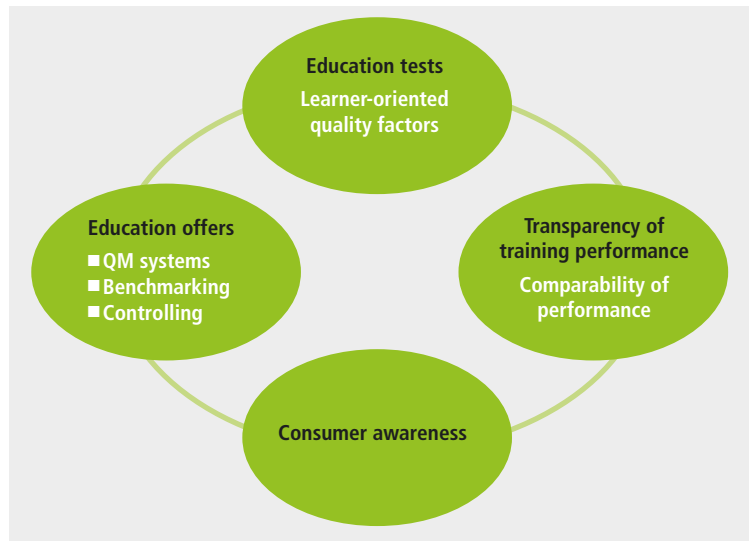
In the context of these approaches, such issues as theoretical foundations, target group reference, sense of quality, expectations and prospects were raised and debated controversially with an eye to

- the efficiency of quality approaches,
- acceptance on the part of training providers and consumers,
- suggestions for further development.

There was no consensus as to which approaches were the most effective. There was agreement that it was necessary to strengthen learner orientedness as a motive force for quality development, especially in government-sponsored continuing training, and that a paradigm shift in favour of learner-oriented approaches was on the horizon.

That looming paradigm shift has set a process in motion which, by creating more transparency and competition and by generating critical awareness among consumers, is prompting training providers to reappraise and constantly improve the quality of what they provide. Hence the process of ensuring more quality can also be represented as a quality circle (see Fig. 2).

Fig. 2: Quality circle



Presentation of a quality assurance process as a quality circle is a way of showing that quality assurance is or can be a permanent process.

In that process, the process factors are both dependent and independent variables. In other words, expert-oriented and learner-oriented approaches to quality assurance interact. In that process, the increasing significance of learner-oriented approaches can serve as a driving force for quality development by increasingly inducing training providers to take quality assurance measures and constantly improve product quality by doing so.

### Training between quality and quantity

This working group was all about training. Although the creation and provision of a sufficient supply of training places has dominated the education policy discussion for some years, demands for the assurance of more training quality have increasingly vied with that issue for attention recently. Increased interest in comprehensive and systematic monitoring of quality assurance in vocational education and training and hence also with regard to in-house

training is formulated in the 2005 amendment to the Vocational Training Act as well.

Are quality and quantity incompatible or are they two sides of the same coin? Light was thrown on this and other questions in the working group from the points of view of research and practice. The theoretical foundations and developments were reflected in experience with concrete problems gained by representatives of day-to-day practice. Analogous to the dual principle of vocational education and training in Germany, two partners spoke on each aspect, one from the point of view of research and one from the point of view of day-to-day practice.

The working group focused on the two partners in the dual system, namely

- the **companies** and their activities to ensure in-house training quality and
- the **vocational schools** and their influence on quality assurance in different courses of training.

Moreover, the framework conditions for training were also highlighted; these are

- the **training place market** and its indicators for assessing the current training situation and
- **European developments** and their influence on the organisation of training processes in Germany.

The participants were almost unanimous in the view that questions of the quality and quantity of training increasingly needed to be seen in context. Nonetheless the dual system of education and training remains closely connected with developments in the labour market. The investment of resources in training places must not only compensate for a drop in supply in difficult business situations, it must also be justified through a high quality of training. At the same time, making resources available is the only way a high quality of training can be guaranteed. It turned out, however, that there is no magic formula for harmonising the demands for quantity and quality.

## **Quality in continuing vocational education: Public-sector strategies and in-house strategies to foster customer orientedness and outcome orientedness**

Customer orientedness and outcome orientedness are buzz words that are often used nowadays in connection with the topic of “quality in continuing education and training”. It was therefore the task of the working group to discuss concrete strategies with which different groups of stakeholders pursue those goals.

Persons and organisations interested in continuing education and training are basically confronted with two challenges:

- The continuing education and training landscape is diverse and confusing. There have been efforts to establish standards in the field of continuing education and training as well (through further education ordinances, for example). However, continuing education and training is often expected to take place as close to the workplace as possible, and this requires severe individualisation of the training offered.
- The resources made available for continuing education and training have a tendency to decrease, and/or the long-term utility of the courses of training concerned increasingly needs to be predicted (outcome). This is not just a challenge for those who apply for continuing training courses. The providers of continuing training also have to develop strategies for proving and ensuring the utility of what they offer.

The strategies presented in the working group for promoting customer orientedness and outcome orientedness can be seen as answers to those challenges as well.

### **Strategies of public-sector stakeholders**

Public-sector stakeholders are particularly interested in greater customer sovereignty. The continuing training tests of the *Stiftung Warentest* were presented; they provide standardised information on the structure and process quality of the training offered so that those interested in training can check whether their individual



needs are met. Evaluations of the continuing training tests show that their readers assess the tests as good orientation aids. The problem is, however, that the familiarity of the general public with these continuing training tests is still relatively slight.

Another strategy of public-sector stakeholders is to sponsor counselling opportunities in the field of education and training. In this connection, findings from a study financed by the *Federal Ministry of Education and Research (BMBF)* on the vocational and educational counselling landscape in Germany were presented. It was shown that counselling services are made use of only as a reaction to forced transitions (for example, the transition to joblessness). Only highly qualified persons use education counselling more often proactively, in the form of career counselling for example. Here we are very far from the target of the European Council resolution of May 2004 in favour of an improvement of vocational and educational counselling. According to that resolution as many people as possible should consistently take advantage of educational counselling services as an accompaniment to life-long learning.

### Strategies of the providers

The *ImZiel* project of the universities of Düsseldorf and Munich proceeds from the assumption that the success of continuing training providers depends in part on whether or not they manage to adapt their training content and advertising messages precisely to the wishes of individual population milieus. Thus the adult education centres (Volkshochschulen) often reach the traditional milieus only, while they leave (post)modern milieus cold. Help is expected to come from the “product clinics” stemming from market research, which can be used to test newly developed courses of training for their milieu appropriateness.

Different projects of the *Research Institute for VET (Forschungsinstitut Betriebliche Bildung – f-bb)* proceed from the observation that those responsible for continuing education and training are often unaware of where education needs exist in their companies. They can resolve that problem by systematically tracking down

continuing training gaps together with the training service providers in a series of standardised workshops or coaching processes.

For continuing training providers, however, this can mean that they have to invest more in consultative services before they can sell their training services.

## Strategies from Europe

Outcome orientedness is a target that has been placed before the national education and training systems, training providers and learners especially through European education and training policy. The reason for this is the need to make the quality of the general and vocational education systems in Europe visible in the global competition for business and to achieve more transparency and comparability of learning outcomes. Instruments and standards to make this possible, such as the European Qualifications Framework (EQF) and the Common Quality Assurance Framework (CQAF), have been developed and are currently being implemented. The focus is on the outcomes of a learning process, e.g. how well problems are solved in occupational action, and not so much on how, when and where the individual acquired these “skills”. The different stakeholders in this process face great challenges. The core themes in solution strategies are knowledge and observance of the targets and standards and the question of how these are measured and how the existing quality assurance systems and strategies are to be linked with those in the EQF and the CQAF.

Certain projects in the LEONARDO DA VINCI programme and the follow-up lifelong learning programme are working on ways to resolve this issue in the European context. In addition to competence measurement, the University of Flensburg and six European partners in the *Reflective Evaluation* project are concentrating on the key role of teaching personnel in improving continuing education and training practice. They have jointly developed a web-based self-evaluation instrument that supports independent, dynamic quality development according to prescribed outside criteria.

## Knowledge management as a contribution to quality development in vocational education and training

The acquisition of qualifications and their adaptation to new requirements arising from technological progress in vocational life depend on continuous learning. The use of knowledge management makes it possible to use knowledge as needed regardless of time and place. Managing knowledge means consciously dealing with knowledge as a resource. It makes not only technical information but also the experience of experts accessible to a new circle of users. Information is compiled in databases; networks are formed and their structures are documented, so that the knowledge of experts can be located. Knowledge management thereby creates transparency concerning the knowledge of an organisation. That knowledge is used in working and learning processes. It is scrutinised, supplemented, updated and recombined. On the basis of various examples of the use of knowledge management in vocational education and training research and in initial and continuing training, Working Group 3.3 looked into the following question: “How does knowledge management contribute to quality assurance and quality improvement in vocational education and training?”

Various knowledge management methods are being developed in **EU incentive programmes** that contribute to quality improvement in vocational education and training by linking theory and practice. The WEKnow project integrates practice-oriented expert knowledge into university teaching. In the Microteaching project, modular teaching and learning opportunities are networked for short-term, low-cost continuing training as needed. The focus of the Reload project is continuing training for unskilled and older DIY store employees and those who are unaccustomed to learning. Access to information and teaching materials at the workplace means that knowledge can be applied directly, and it promotes independent learning skills.

The content of a knowledge management system must be constantly updated to keep up with vocational developments. For example, the **ConFect** knowledge management system has been used in the context of the development of education and training measures for disadvantaged persons (older, long-term unemployed, persons

with immigrant backgrounds, those who have forgotten how to learn) to promote the exchange of information and experience among training personnel.

ConFect provides information on courses, learning materials and examples of best practice. Education measures are documented and further developed. In addition, standards are laid down for selecting and holding courses. The skills of course participants are determined, for example, through self-assessment and third party assessment and learning targets are agreed on. Other quality assurance measures include further training for teaching personnel and exchanges of personal experience. The quality of the continuing training offered is determined not just by the experts but also by the labour market in that only those courses are included in the continuing training programme that are in demand and have proven their worth in the world of work.

Quality assurance also takes place at several levels in the VET Communication and Information System (Kommunikations- und Informationssystem Berufliche Bildung – **KIBB**), a knowledge management system for vocational education and training research. The task of the KIBB is to respond to questions from policy-makers, document vocational education and training research and support the exchange of information in a network of German vocational training researchers (AG BFN). The quality of the overall supply is ensured through periodic evaluation and advisory bodies. Emphasis is placed on close cooperation with experts. The AG BFN is another quality criterion: Research projects from this circle are documented only if they have been written and proofread by the researchers themselves.

In the above examples quality has been controlled and thus determined essentially by experts, but in the following knowledge management approach the learners also contribute to quality assurance:

An approach coming from the **Fakt Pilot Project** focuses on the transfer of the knowledge of trainees on their own responsibility. Not just the trainers but the trainees as well present their knowledge and experience and share them with other trainees regardless of the location of the enterprise.

In discussions with their trainers the trainees work out their level of knowledge, reflect their experiences and develop the corresponding learning arrangements, which are then entered into the knowledge management system. The trainees become familiar with the sale and marketing of their products by setting up junior firms with their own self-reliant cost centres.

The trainees learn to conceptualise their knowledge and put it in media-acceptable form. Process-oriented and action-oriented thinking, media competence and independent learning competence are fostered. The motivation of the trainees is heightened. The level of knowledge is determined and goals are set jointly with the trainers and with the help of incentive sheets and development sheets. Knowledge gaps can be identified and filled. The trainers too must constantly continue to learn, and they have regular exchanges in discussion circles. They have to have completed a course of training themselves and have the certificates prescribed by the Ordinance on Trainer Aptitude (Ausbilder-Eignungsverordnung – AEVO). The training success of the enterprise is specified in figures and constantly monitored.

Amassing knowledge in itself is not the same as ensuring and improving quality in vocational training. The precondition for that is that the information is correct, up-to-date and relevant. Knowledge management systems make it possible to offer information as needed, when needed and where needed. Vocational practice and theory can be directly interlinked. Information quality assurance takes place at different levels: The information comes from experts and is verified and if necessary supplemented and revised by experts. Continuing education and training and the exchange of experience help develop the competence of the stakeholders in knowledge management. Work processes and learning processes are standardised and learning targets are set in such a way that deviations can be identified and remedied rapidly. In addition, the use of knowledge management fosters independent learning competence and media competence. In that way knowledge management contributes to quality assurance and quality improvement in vocational education and training.

## People taking central stage: Personnel aspects of quality development in vocational education and training

Very diverse objects that collectively affect quality development were dealt with under that heading: By way of introduction, the legal and factual demands on the skills of teaching personnel in vocational education and training were compared.

### The legal demands

In the discussion on the suspension of the Ordinance on Trainer Aptitude (AEVO) and its possible negative effect on the qualification of training personnel and hence on the quality of training it is easy to forget that the legal demands on personal and professional aptitude (§§ 28 to 30 BBiG) have not been suspended.

The core of the aptitude provisions is § 30, reformulated in the 2005 BBiG amendment, the regulatory content of which are the §§ 20 and 21 regulations and the provisions of the sixth part of the old BBiG. The individual regulations on professional aptitude previously scattered through the BBiG have thus been merged in a uniform and transparent provision.

Professional aptitude is now formulated in positive terms. It is present if the training personnel or trainers possess the occupational skills, knowledge and competence and the skills, knowledge and competence in occupational and labour pedagogy needed to impart the subject-matter of the course of training.

§ 30 (2) BBiG concretises the sub-element “occupational skills, knowledge and competence” and stipulates possible alternative proofs in numbers 1 to 3. The common requirement remains, however, that aptitude has been proven in a subject corresponding to the training occupation and that the training personnel have been practising the occupation for an adequate length of time.

## The factual demands

So far there is no government-approved job description for trainers. Although the term vocational trainer keeps coming up in different company agreements, regulations and collective agreements, there is no generally accepted definition. Until a few years ago, imparting professional competence was at the centre of training. The goal was to “systematically take the trainee to the examination”. The training staff was defined primarily in terms of their professionalism.

The shift from an industrial to a service society and the necessary qualification structure that this entails presuppose in the end a different and more ambitious vocational training as well. Modern training in the form of learning process guidance is expected to pave the way to vocational action competence better than traditional approaches and at the same time contribute to the social integration of young people. The trainers as learning process guides arrange and guide the learning processes of the trainees. They utilise work situations that are as realistic as possible for learning, plan and analyse the learning processes with the young people and make them aware of their newly acquired competencies.

## Starting points for supporting in-company training personnel in the European context – Preliminary findings of the EU’s EURO-TRAINER study

The EU Commission set an ambitious target with the Lisbon Process of making the Union the most competitive and dynamic science-based economic area in the world. General and vocational education are important factors in achieving this goal. The key player in implementing life-long learning in Europe is the education and training personnel. Two studies are currently being carried out on this subject in several European countries, supported by EU funds. One of the members of the consortium with the help of which one of the surveys, known as EUROTRAINER, is being carried out, is the BIBB.

The evaluation of the German survey of experts indicates that owing to higher demands and the lack of incentive systems it has become

harder to recruit skilled workers as trainers. The suspension of the AEVO has also led to a marked decrease in the qualification of the training personnel. If the suspension is further extended, there is a danger that there will soon be a growing number of persons with rudimentary qualifications facing a small number of highly qualified persons who take further training as professional pedagogues. At the same time, in the face of process orientation and cost pressure, the trend away from full-time personnel towards part-time trainers was increasing.

It is a paradox that a country like Germany, which has had a standard for the qualification of personnel providing in-company training since 1972 and thereby harvested world-wide recognition, is suspending that standard at a time when the neighbouring countries and the EU are beginning to take an intensive interest in this question.

### **AEVO: Findings of a study of the effects of the temporary suspension and comments from day-to-day practice**

The purpose of the five-year suspension of the AEVO in 2003 was to cut training costs and dismantle bureaucratic hurdles. The target margin was to create 20 000 additional training places a year. The BMBF commissioned the BIBB to carry out a country-wide representative company survey in 2007 on the effects of the AEVO suspension. At almost the same time the BIBB carried out a survey of all chambers of industry and commerce and all crafts chambers on the AEVO suspension. The most important findings of the two surveys were:

- The suspension of the AEVO brought less additional training places than its proponents expected and in particular no increase at all in companies with immigration backgrounds.
- Negative effects on the quality and image of the dual system of vocational education and training are already discernible. The long-term effects are seen still more critically.
- The utility of the AEVO as an important instrument for ensuring training quality is recognised by the majority of those polled, and even from the companies that do not provide training themselves. Accordingly, more than half the companies con-



sider the AEVO to be necessary and two-thirds of the chambers favour reinstatement of the AEVO in revised form.

In connection with the research findings, practitioners call to mind the 4th guideline of the “Vocational Education Innovation Circle”. It reads, rightly: “The precondition for high-quality vocational training is the corresponding professional and pedagogic qualification of the trainers.” What that means is that high-quality pedagogic qualification of the trainers requires the full validity of the AEVO. Policy-makers will therefore be well advised not to prolong the suspension. Instead, the AEVO should be fully applicable from 1 August 2008 onwards.

### **Pathways to improvement: Training quality and continuing education of education and training personnel**

In preparation for the Trainer Aptitude Examination, special continuing education courses are offered either as classroom courses or in distance education (AdA). Although the requirement that these competencies be demonstrated in an examination was suspended for five years in 2003, the courses are still in demand. About a dozen distance learning opportunities are currently being offered in the marketplace, but how great the demand is is not yet known at the present time. There is a recommended 120-hour framework plan for the subject matter of these offers. The questions that arise from the point of view of the consumer are in particular to what extent the courses are based on the framework plan and, if the learning targets are comparable, how the differences in price and duration can be explained.

The continuing education tests department of the consumer safety group Stiftung Warentest is currently conducting quality tests of AdA distance education courses. The testers make use of the classroom phases of the courses three times. The documents and/or instruction letters will be assessed by experts. Analysis of the content of the customer information and the General Terms and Conditions are further aspects of the study that are evaluated in an expert report. The courses are then compared and quality judgments are handed down. For this, quality standards are formulated

and continuing education practice is evaluated according to these standards. The interested public is then provided with checklists, standards and prospects.

## **The legal aspect: Legal issues related to vocational education and training**

First the topic “The state’s education claim and compulsory vocational schooling” was examined in the working group. It was shown that the principle of government school supervision (Article 7, para. 1 of the Basic Law) does not, in terms of its genesis, establish the state’s education claim but assumes it as a given (the state supervision serves to guarantee ideological neutrality). The education claim of the state, however, ends by law when the trainees come of age (on their 18th birthdays), as does the possibility of compelling the trainee to take part in general schooling (one-third of vocational school lessons). It seems possible in principle to compel the trainee to take sufficiently broad occupation-related instruction going beyond the limits of the occupation field, but not to attend a specific institution (vocational school). The right extended in Article 12, para. 1, “freely to choose an occupation, workplace and training venue” stands in the way of that. It was further concluded from the expiry of the state’s education claim with adulthood that the legitimacy of a limitation of training pathways lapses as well. In addition to the classical form of dual education and training and the established full-time school training, other training forms can therefore become established beyond the possibilities provided for up to now under § 43 para 2 BBiG. Further reform of the examination system is therefore indispensable.

The regulatory competence of the federal government in the field of university-level vocational training was the theme of another paper. The fictional “Federal MINT Programme (mathematics, informatics, natural science, technology)” was used to test the action possibilities of the federal government both under the old law and under the 2006 federalism reform.

It turned out that the federal government’s possibilities of taking action in the field of university-level vocational training have be-

come **greater** owing to the federalism reform – contrary to what was originally intended – especially if one interprets it in a federal government friendly manner. In particular, the international and overall government tasks come into play, as does the interpretation of the new federal government competencies under Art. 74 para 1 No. 33 of the Basic Law as well as a wider meaning of the right of business and labour to make provision for qualification and labour market development, whereby one must of course keep the new deviation legislation in mind. The principle of allegiance and freedom of research must not be neglected either.

Other legal issues discussed in the working group were “Is there an entitlement to recognition of privately developed training occupations?” and “Is there a right to training according to the training concepts of other EU member states in Germany?”

Courses of training taken in other EU member states according to the training concepts prevailing there have been recognised in Germany under EU law for decades, mostly without problems. Even if major parts or the whole of these courses of training are taken in Germany but the examination is taken under the rules of another EU member state, the training has to be recognised in Germany (as training in another EU member country). Whether the examination can be conducted in Germany by agencies from another member country is uncertain.

After the constitutional foundations of the current rules for training occupations in Germany had been presented, it was pointed out that changes in EC law as well as the practice of arrangements under EC law have indirect repercussions in German law as well, with reference to inner German situations. If with reference to the EU a diversity of different and only partly similar courses of training are recognised in Germany, then it is contrary to the principle of equal treatment (and of commensurability of limitation of the freedom of occupation, Art. 12 para 1 of the Basic Law) to reject such a diversity for courses of training created inside Germany and demand uniformity of training on the government pattern.

“Dual courses of study: Overview of structures” and “Legal aspects of dual courses of study” were the titles of two papers that

raised issues that can be expected to be of growing importance for the future: Dual courses of study practice the technical duality of theory and practice at the university level. Up to now they have represented a tiny minority (2 per cent of students) with a clear upward tendency, originally almost exclusively at vocational academies, now increasingly at technical colleges and some universities as well. There are various organisational forms, in which two things are noteworthy: 1. Very close cooperation and consultation between academies/universities and companies is constitutive; one of the core problems of the dual system of vocational education and training, the lack of learning venue cooperation, has been solved here. 2. Only 15 per cent provide for cooperation with vocational schools.

Legally speaking, dual courses of study can lead to problems if the federal states enforce compulsory vocational schooling and if the legal status of the students/trainees in the company is affected.

The working group ended with an evaluation of the amendment to the Vocational Training Act from an occupational pedagogy perspective. After the changes in the 2005 BBiG were described and underwent an initial critical evaluation by the social partners, questions concerning four aspects were submitted from an occupational pedagogy perspective: structure of vocational education and training, goals of vocational training, vocational training venues and tasks of learning venue cooperation. The hope was expressed that the evaluation of the BBiG amendment undertaken by the BMBF in 2008 and the reflections of the Steering Committee of the BIBB in that regard could be included.

A video conference with the 4th Distance Training Congress of the Bundeswehr at the Helmut Schmidt University of the Bundeswehr in Hamburg featuring a lecture on the subject of "Copyright Law Issues in IT-Assisted Training" underscored the complexity of the legal issues raised and illustrated the high degree of legal uncertainty and incalculability that made it advisable for all concerned to avoid legal disputes in this area.

## Outlook

The Forum 3 events provided an impression of the breadth and depth of the current discussion on the subject of “Quality in vocational education and training”.

This applies to all-important questions such as the definition of the “quality” concept in vocational education and training:

- Should one adopt the internationally and interdisciplinarily accepted standardisation?
- Does the “target orientation” on the tasks of vocational education and training (§ 1 BBiG) come to the fore after the increasing learner orientedness has already pointed in that direction?

This applies equally to the shaping, the exhaustion and the observance of the legal framework of vocational education and training in the Basic Law and federal and state law, e.g.

- To what extent is day-to-day practice really guided by the existing legal framework?
- To what extent does the federal government exploit its legal possibilities?

One must ask how the major optimisation problems on the horizon are to be dealt with, such as

- guaranteeing and improving training quality
- with the number of trainees dropping sharply in the future and
- at the same time with the desired higher proportion of university graduates.

Ultimately the measures taken in individual areas have to be judged by their quality, too. For instance

- when comparing the different strategies to foster customer orientedness and outcome orientedness and
- the structuring of knowledge management to suit the target and the addressee.

While the promotion and further development of the qualification of the training personnel is one of the “input” factors, it will still be indispensable in the foreseeable future if advances are to be made in vocational education and training.

# Forum | 4

## Vocational education and training in the course of life

Coordination:

*Dr. Gesa Münchhausen*

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- Thresholds, hurdles, waiting loops – Transitions between education and the employment system
- Better late than never? – Continuing training concepts for the low skilled
- Skills development and continuing education in the course of working life
- Migration background – Disadvantage or potential in vocational education and in working life?

## Forum 4

### Vocational education and training in the course of life

For a long time vocational education and training was assigned to individual phases of (vocational) life: the period of initial training during the phase after leaving school and the period of continuing training for vocational advancement after the first years of work. These attributions were grounded in the conception of “the” normal course of vocational life, characterised by linearity, continuity and constancy – both in individuals and enterprises and in the job requirements, the supply of jobs and, not least, the system of vocational education and training itself. Looking back, such conceptions seem to be part of a long-gone idyll that perhaps never was one – that possibly never existed.

Nowadays vocational education and training is a topic that is of importance for one’s entire working life and – in contrast to the earlier limitation to individual phases of life – is now seen and discussed in the context of one’s entire (vocational) course of life and thus as a part of processes of development and change.

On the one hand it has to do with structural changes in the world of occupations and work, which make occupations and what has been learned obsolete just as they lead to the emergence of new occupational profiles and new initial and continuing training pathways. On the other hand it has to do with changes in individual qualification and skills profiles, in the individual’s demands on work and occupation, and at the same time it has to do with the question of how vocational education and training must be structured in order to be able to keep pace with all these changes and make a positive contribution to them.

In the working groups of Forum 4, various aspects of this topic area were taken up and discussed in relation to available insights and open questions.

Thresholds, hurdles and waiting loops – the focus of the first working group in this Forum – are being identified more and

more clearly as characteristics of transitions within the education and training system and between the education system and the employment system.

New ways of promoting permeability and the development of comprehensive transition management were discussed.

Getting a second chance to obtain vocational training certificates and partial vocational qualifications was stressed over and over as an important topic in the discussion about ensuring an adequate supply of skilled workers. The second working group took up the topic of continuing education and training concepts for the low-skilled. Modular certificate-related qualification concepts – according to one thesis – expand the possibilities of recruiting skilled labour for enterprises and offer employees with low skills in particular the opportunity to obtain skilled worker training on the job.

The working group on competence development devoted itself to the topic of “life-long learning” and its significance in the context of social and individual change requirements. The substantive focus was on questions of promoting and structuring life-long learning; they were pursued on the basis of the latest research findings and practice concepts from vocational education and training.

One of the major and topical change topics was that of immigration and coping with and making worthwhile use of it – both at the social and at the individual level in both cases. The last working group of the Forum therefore posed the question of the significance of an immigration background in vocational education and training and in vocational life. Research results show disadvantages here – in education, training, labour market and career opportunities, for example – as well as potential, for example in the form of intercultural competence and the further development of corporate culture towards a culture of esteem for diversity.



## **Plenary session: Flexibilisation in the course of occupational life – how much is needed, how much is possible?**

Under that heading, aspects of the structuring of education and training systems and of individual structuring and changing capabilities for and in social change were up for discussion.

### **Results**

Flexibilisation in the course of occupational life is the result of technological and economic policy developments that demand something new and different of individuals at shorter and shorter intervals and change the temporal and social arrangements in vocational life as well as in other social contexts, sometimes radically. Education systems and individuals are forced from outside, as it were, to adapt to these constantly changing conditions. That is one side of the developments being talked about. The other side is this: The dissolution of traditional rigidly prescribed structures in vocational life and in the social living conditions also provides scope for individual decisions and the freedom that individuals can use to shape their own (vocational) biographies – and in the end have to use to keep up. One question was: What contribution can the education system make to support these possibilities of individualisation and what contribution does it perhaps make to hindering them?

In first place among the inhibiting factors is the high degree of selectivity of the German education system, to be found even in the different forms of continuing education and training – continuing general, vocational and company education. It has the effect that a substantial part of the population is disconnected from learning opportunities and finds it harder and harder to connect so as to be able to resume and continue qualification and competence development. It is therefore necessary to advance the flexibility and permeability of the education system so that exclusions are prevented and connections are opened up and safeguarded.

Two other questions are: How do individuals make use of the educational opportunities offered by the education system, and what additional or alternative learning and qualification pathways can

they access in order to cope with and shape flexibility requirements in their occupational biographies?

In order to expand and support the freedom of action of individuals in shaping the course of their occupational lives, the model of the “normal biography” in the sense of a working biography that is usually continuous must be demystified so that a change of job and occupation – something that has now become “normality” – can lose its negative image and be seen and used as an opportunity.

But then the rather static construct of age-determined phases of the course of occupational life linked with the concept of a “normal biography” must also be replaced with the dynamic construct of a process of competence, qualification and personality development that goes through the whole of one’s working life. In order that the individuals can advance and shape this process themselves, counselling must be institutionalised and developed as something that is offered throughout one’s life – especially as assistance in cases of vocational mobility, such as change of job or occupation, vocational advancement, and leaving and returning to one’s occupation.

The European countries, just like the individuals, are called upon to develop flexibility, specifically in their education and training systems, to change or totally do away with rigid rules and tried and true methods and follow new paths. Informal learning and skills acquired informally must also be given better status and methods of recognising and giving credit for them must be developed. In designing their reform processes, the countries must deal with their own national needs, possibilities and hurdles and at the same time with the European processes, up to and including the quality enhancement and standardisation of the education systems in the EU. The “European factor” is definitely regarded as a driving force for the necessary national processes of reforming the education and training systems.

### **Thresholds, hurdles, waiting loops – Transitions between education and the employment system**

The education and vocational training system in Germany is a multi-stage system. At the transitions, fundamental decisions are

made that determine the course of one's life and career. The pathways from school to training, from training to employment and during employment to further training are no longer straight lines and now entail a wide range of opportunities as well as risks.

The working group tackled the following aspects of this topic area: quantitative and qualitative problems at the transition from the school of general education to vocational training, change and discontinuation of training, training at full-time vocational schools in conformity with the BBiG/HwO, transition from initial vocational education and training to employment and continuing training while employed. Results were presented from current research projects in which transition problems are identified and their causes are analysed, as were approaches to eliminating and overcoming thresholds, hurdles and waiting loops at the transitions between the systems of education and employment.

When it comes to the first threshold, the transition from school to initial vocational education and training, it is also a question, again and again, of "training maturity" – the definition of which is often the subject of violent debate between representatives of employers and trade unions. On the basis of scientific studies, however, experts agree that the level of qualification of applicants for training places has indeed deteriorated, although training chances are not influenced solely by "training maturity" and the level of qualification of the school leavers but are very significantly determined by the situation and problems in the apprenticeship marketplace as well. "Training maturity" should be seen as a standard that all young people can and should attain. For that purpose it is necessary and possible for all stakeholders in vocational education and training, and primarily schools, companies providing training, parents and last but not least the young people themselves, to interact with one another to arrive at better results.

Action concepts already exist serving that goal. Studies of "student plant work experience" show that when this is well prepared and evaluated it has a positive effect on the assessment of individual chances and on the chances of remaining in a course of training later. The rather traditional instrument of vocational preparation measures also makes a positive contribution to the integration of

young people, especially general secondary school graduates, into the dual system of vocational education and training.

A hurdle on the path from school to employment that has been given little attention so far is the change of training, which often amounts to discontinuation of training. In 2001, every fourth new training contract was prematurely dissolved. In 2006 it was still every fifth. The misallocation of resources that this entails has been given too little attention in the discussions on the transition between the education system and the employment system.

Different models for training in full-time vocational schools in compliance with the BBiG/HwO were discussed from the perspective of positive and negative experience in implementing the new statutory regulation. In the federal states of Berlin and Hamburg there are already credit models that can be considered successful. Collective bargaining provisions to promote the transition from training to occupation, on the other hand, were not considered very effective since they are only recommendations and collective bargaining coverage is declining.

The completion of initial vocational education and training is a milestone in the life of a young person, but it seems to be less and less a guarantee of qualified life-long full-time work. One determinant for continued employment is the training behaviour of the companies, which have different motives for providing training, not just the recruitment of personnel for their own use. The probability of being hired by the company providing training therefore varies from one industry to the next. There are also many other factors influencing one's occupational biography in the first years after completing training. Research findings show that there are various patterns in the occupation entry phase, some which correspond to a "normal biography", others which can be marked by joblessness and a precarious existence.

Life-long learning individualises responsibility for shaping an occupational biography. At the same time, the individual cannot always influence the framework conditions. Continuing education and training counselling and competence balancing play an important role in avoiding the high risk of making wrong decisions. The

more the competence balance sheet is structured as an “objective report card”, the harder it is for the employee to deal with it and the greater the need for further counselling.

In the final discussion attention was drawn in particular to the different opportunities of counselling, starting with the continuing education and training counselling and going all the way to the opportunity and need for counselling already at the start of training.

### **Better late than never? – Continuing training concepts for the low-skilled**

The labour market risk is high for the low-skilled. Their unemployment rate is above-average, while their rate of attendance of continuing education and training courses is below-average. Yet it has been shown that continuing training can contribute to attaining, retaining and expanding the employability of this group as well. The working group concerned itself with concepts for the continuing training of the low-skilled and framework conditions that make possible an implementation that precisely fits different starting conditions and targets. Proceeding from a situation analysis of developments in the skills needs for simple work and the action requirements they imply, possible approaches to continuing training and labour market integration for this target group in Germany and Austria were discussed.

For a long time situation analyses have shown that technological progress leads to a sectoral structural change and that this is accompanied by a trend towards higher and highly qualified jobs and qualification requirements. This trend corresponds to the simultaneous trend towards a much higher proportion of secondary school and college graduates in the work force, while at the same time the proportion of those without a vocational training certificate is estimated to remain constant.

The forecasts differ widely for the sphere of simple work. Some see it as residual and likely to disappear completely in the course of further developments.

Seen in that light, simple jobs are the negative side of the trend towards higher demands and qualifications. Their number and significance is falling and the level of knowledge and skills required for them is falling at the same time. Others arrive at contrary findings that demonstrate that an appreciable number of simple auxiliary and technical jobs will continue to exist and that technological and organisational changes affect this sphere as well. Consequently the demands on the semi-skilled and unskilled change and increase parallel to the demands in the fields of work of the more highly qualified. Flexibility and teamwork and communication skills as well as workplace-transcending cooperation capability will therefore be increasingly necessary for simple jobs as well. However, the development of continuing training opportunities for the changing job profiles at the lower end of the skilled worker scale and for the development of the vocational qualifications of the unskilled and semi-skilled has not kept pace with the growing need.

This makes the already available and successfully applied concepts, the dissemination of which can counteract the shortcomings that have been identified in continuing training opportunities in this field, all the more significant.

Successful qualification approaches for those with low formal skills link working and learning and thus facilitate the transfer and application of what is learned to day-to-day work by taking into consideration the requirements at concrete company workplaces. This concept has proved successful not only for employees in companies but also for the target groups of the long-term unemployed and the job-seeking immigrants among the low-skilled, whose integration in occupations or gainful employment is thus specifically supported. Yet it is precisely certificate-related qualification in the form of retraining for immigrants with low skills that confronts participants with high demands, for they have to master the subject-matter of a course of vocational training in the much shorter retraining time. Close cooperation with the companies and the coupling of working and learning in the context of retraining measures lead to good integration rates later at the transition to employment.

The qualification modules that are implemented in on-the-job qualification in the framework, for example, of re-integration measures

for long-term unemployed persons with low skills are an alternative to this concept. The advantage: Learning stages are easier for the participants to grasp and the certification of the individual stages enables them to complete the missing modules after interruptions and get an approved vocational certificate.

Through the qualification of their semi-skilled and unskilled employees, companies are interested above all in making their possibilities of deployment more flexible – they want to be able to put their employees in different workplaces depending on the work load – and in greater employee loyalty and quality assurance in the work processes. If there are no opportunities tailored to the needs of the industry and the target group, companies have to train their semi-skilled and unskilled employees in their own way, and they do that successfully by activating in-company resources for internal and job-integrated qualification measures. It is in on-the-job continuing training that we can best see the possibilities of modular education concepts for certificate-oriented continuing education and training of low-skilled workers. Such a concept can be distinguished by the transparent, skills-oriented structure of a modular qualification system that is intrinsically connectable and certificate-oriented and in that way enables need-oriented and practical training. The concepts presented by companies and education providers have in common as their central element learning in real work contexts and the fostering of autonomous work and self-regulated learning. We find that SMEs in particular require support at the regional level in identifying needs and planning and implementing similar training concepts tailored to their needs. They can thus be helped in recruiting the skilled workers they need through, among other measures, catch-up qualification of semi-skilled and unskilled employees and job-seekers. Education service providers can make a competent contribution to this.

Over and above that, however, it is important to expand and build regional networking structures in which, from continuing education counselling to funding opportunities for companies, information is bundled and the main stakeholders work together. In this way, finally, the continuing education and training opportunities of the low-skilled can be improved and their potential can be developed to meet the need for skilled workers as well.

## Skills development and continuing education in the course of working life

The subject matter covered by the working group was learning from entry into the workforce to the transition to retirement. The focus was on questions of promoting, ensuring and shaping life-long learning. Concepts and case studies for promoting learning continuity in the course of working life were presented. Tentative attempts were made to isolate the necessary prerequisites for life-long learning in the examples studied.

### Topic area 1: Concepts for promoting life-long learning

The concepts discussed start with quite different problem areas, such as ensuring the continuity of life-long learning by promoting the development of the skills of more “disadvantaged” target groups (for example older persons, temporary workers), the promotion of competences that are especially important for life-long learning (for example change competence) and the improvement of framework company and social conditions (funding concepts, for example).

Two groups of persons were given close attention, the temporary workers and the older employees, whose continuation in the company is limited either from the beginning (temporary work) or for reasons of age. Investments in continuing education and training therefore seem less sound, from the point of view both of the company and the individual, than in the case of the younger core personnel of the company. Continuing education and training for older employees is approached more in the context of human resources development or by outside providers of continuing training, but in the case of temporary workers the focus is more on skills development in the work process.

Life-long learning does not relate only to the ability and willingness to continually acquire new knowledge, it also includes the ability to respond to changing social requirements and to integrate them into one’s own biography. A survey of about 1 000 trainees in the context of a pilot project found that there is a connection between the kind of capabilities or properties one attributes to oneself and the way one copes with changes. It was seen as important to con-



front young people with such changes during their training, since when dealing with changes and the knowledge of one's own strong points becomes routine one is more willing to accept what is new in such situations.

The fourth paper in the first topic area also dealt with life-long learning problem groups, that is, social groups that participate in life-long learning to a far below average degree. It was made clear first of all that Germany, in comparison to many other countries with which it is engaged in global competition, does not invest enough resources in life-long learning. Individuals, companies and the state, they all share responsibility for this under-investment. The expert group on funding life-long learning recommended a target group related architecture of funding proposals and presented their basic features. Then the response there had been to the proposals in the political arena so far was discussed.

## **Topic area 2: Approaches to the implementation of life-long learning in practice**

A glance at the practice of good examples of life-long learning showed that the implementation of life-long learning has to set in not just with the individual employee (continuing education and training motivation, consideration of individual learning needs and interests) but also in the safeguarding of company (appreciation, learning culture, initial and continuing training offered) and non-company framework conditions (regional support structures) that support the continuity of learning.

A company example made it clear that life-long learning has to start during initial education and training. Constant learning and continued learning must be anchored in corporate culture as a matter of course. Learning and change must be initiated and monitored over and over. Outside continuing education in "seminar form" can grasp company requirements only to a limited extent. What is important is that know-how is passed on internally by the employees as internal experts.

The accelerated change in the employment system also leads to employees being confronted more and more often with changes of job, company and occupation. They are increasingly forced to

cope individually not only with their own professional career but also with the learning requirements it entails. This is where online counselling comes in. It can reach individuals wherever they are and can take their individual needs into account. The experience with a virtual community ([www.womens-careers.info](http://www.womens-careers.info)) was presented in this connection.

Regional support structures for continuing education and training was another topic area in connection with promoting the gainful employment of the older workforce. Here, however, there are few successful cases to report. The small and medium-sized enterprises examined were not used to resorting to external resources. Continuing education and training was a subordinate issue in personnel policy.

On the whole, it became evident in the working group that life-long learning had to be promoted in a multitude of ways. In addition to offering the appropriate continuing education and training measures, structuring and organising work so as to foster learning plays an important role in this.

### **Migration background – Disadvantage or potential in vocational education and in working life?**

The course of life and education of a substantial portion of the population in Germany has been determined in part by their own migration processes or those of their parents. This gives rise to new issues for vocational education and training as well. Does a background of migration necessarily mean being disadvantaged, and if so, what does the disadvantage consist in – or are disadvantages attributed to that term? Does a background of migration necessarily give rise to special potentials, or do possible potentials remain to be recognised, accepted and developed in this context? And finally: What can be changed in vocational education and training to do away with and avoid disadvantages in order to make people aware of potentials and develop them? Those are issues that the working group dealt with from various perspectives: theory and practice, vocational orientation, gainful employment and continuing education and training.

The answers to these questions can differ widely, depending in part on how the term “migration background” is used. If it is used to assign individuals to certain groups, it is likely to trigger attribution processes and descriptions of differentness and contrasting demarcations. If it is used as one category among others in analysing and shaping social practice, then insights and indications can be drawn from it that can help us in seeing and shaping living conditions in the spirit of equal opportunity and development of potential. How “migration background” is to be defined when it comes to concrete issues is a fundamental question that has to be asked in research and practice.

Differences in the legal status of immigrants and the related limitations in access to the training and labour market, differences in nationality, social and regional origin and gender have to be taken into consideration in a diversified view of things, together with different education and training certificates and qualification profiles.

Different opportunities for action on the basis of migration background, educational prerequisites and social origin also play a decisive role at the transition from school to training. The results of studies show that young people with a migration background, in that phase of life that is so important for the future, have worse chances of making their vocational wishes come true than young people without a migration background and are shunted into certain predetermined channels. And yet: Are we not overlooking something important and at the same time contributing to discrimination if we ignore the subjective factor, the wishes and action strategies of the young people themselves? With their self-conceptions and their conceptions of their (occupational) futures, all young people are active as acting agents in shaping the “first threshold” transition phase. What the “migration background” factor means for them and what possibilities they feel it opens or closes for them is a matter for further research.

It is likewise necessary to research migration-specific resources and potentials more extensively and thus gain more far reaching insights concerning their recognition and appreciation, since we see that young skilled workers with migration backgrounds devel-

op special competence profiles and use them profitably in everyday vocational life. Although intercultural competence is a fashionable word in every mouth, however, it remains in fact, that is, as a competence of young skilled workers in vocational life, rather invisible and is mostly just accepted and less appreciated instead of being specifically protected and further developed. This shows that intercultural competence, interculturality and cultural diversity do not yet have their due importance in our social life. The education spheres should be no more exempted from this than companies, organisations and institutions. Necessary changes can proceed from an appreciative attitude that takes note of people and their resources and supports sustainable value added. Process orientedness as a form of experience-oriented learning seems to be a promising approach to the development of cultures of diversity as well.

It is certainly a matter of finding a balance between uniformity and difference and developing appropriate, and that means non-discriminatory, concepts from differentiations between different needs and demands. That theme is important, and especially so in continuing vocational training, for finding adequate didactic and methodological approaches to dealing with heterogeneity in courses with participants of different origins. Up to now, participants and instructors in the continuing education and training system are often left to their own devices. The concrete needs in certain vocational contexts should also be an orientation point in imparting German language skills.

This also shows that it is essential to determine the subjective and objective need for learning and support opportunities if the education, continuing training and counselling opportunities are to be suitable for learners and teachers in vocational education and counselling. The diversity of experiences of life, prerequisites for learning, personal possibilities and (occupational) goals is important for this. Migration processes are a part of that diversity.

## Outlook

One factor in the German education system has been repeatedly criticised in international studies: its high degree of selectivity,

which takes effect in various forms of continuing education and training as well. The consequence is a spiral in which those sections of the population that are remote from education and especially training are increasingly disconnected from learning opportunities. They find it harder and harder to connect with qualification and competence development. For them, life-long learning increasingly becomes a spectre. It is therefore necessary to make the German education and training system more permeable and to protect it through recognition of qualifications acquired through individual achievement, a need that is especially acute in the case of persons with migration backgrounds as well. Ease of access to continuing education and training opportunities is indispensable for them to further their social integration. Access to continuing education and training must be guaranteed above all for those who without it are in danger of being marginalised.

Life-long learning is a decisive aspect of the Europe-wide process towards more transparency and comparability of certificates. Quality improvement and standardisation are core elements of the path the EU countries have embarked upon since the so-called Lisbon Strategy. They are quality goals which – formulated at the European level – have to be implemented in national quality standards.

## **Qualification perspectives for small and medium-sized enterprises (SMEs)**

Coordination:

*Christine Noske*

*Benedikt Peppinghaus*

- What are small and medium-sized enterprises (SMEs)?
- Vocational training in SMEs
- The continuing education problem in SMEs
- Inter-company vocational training venues undergoing structural change – Prospects for a strategic realignment
- Prospects

## Forum 5

### Qualification perspectives for small and medium-sized enterprises (SMEs)

#### Preliminary Remarks

The topic of Forum 5 – the qualification perspectives for small and medium-sized enterprises – was dealt with from widely differing points of view in the plenary session paper and in the working groups. Nevertheless the papers and discussions had much in common in the way they evaluated the current problems and future challenges. The following account emphasises those common approaches and therefore deviates from the timetable of the Forum. In order to nonetheless enable the reader to relate the focal themes to the individual contributions, footnotes will be used in the account of the present Forum to refer to the contributions.

#### Overview

The message of the Forum can be summarised as follows: Small and medium-sized enterprises (SMEs) play a primary role in vocational education and training. Possible technical and methodological deficits are compensated for, especially in the crafts, through training in inter-company vocational training centres (überbetriebliche Berufsbildungsstätten – ÜBS).

The low value placed on continuing education and training and the lack of systematic continuing human resources development are problematic for the future of SMEs and the development potential of their employees. Education providers must be called upon to engage in dialogue with the SMEs in order to identify their qualification needs more precisely and better adapt their methodology to the target groups.

Incentive programmes of limited duration are inadequate for permanently anchoring life-long learning in SMEs.

In view of its economic and social significance, government and business ought to provide better institutional safeguards for continuing education. The decades-long experience with the ÜBS should be made use of here.

## **I. What are small and medium-sized enterprises (SMEs)?**

Are there qualification problems specific to SMEs, and if so, are there any suitable strategies for resolving them? Forum 5 did not yield clear-cut answers to those two questions, but it did present a variety of facets of the subject of qualification in and for small and medium-sized enterprises.

Clear-cut statements about small and medium-sized enterprises (SMEs) are not easy to make for the simple reason that the term covers a confusing diversity of enterprise forms, products and service profiles – from the world market leader in certain industrial products to the local messenger service or – to give an example from Forum 5 – from the Croatian specialty restaurant through the plastering firm, a fair trade enterprise with world-wide partners to the media service provider and management consulting firm.

The services of the enterprises can vary widely. But all of them have to be guided by the customer's needs. Often the customer does not just want to receive a certain product or access a defined service but expects a reliable and economical solution to a problem, if possible from one source ("one-stop solution").<sup>2</sup> Services tailored to the customer are thus becoming more complex and knowledge-intensive, the demands on employees rise – especially in enterprises where a small group of employees has to cope with diverse requirements.

Statistics can help filter out some common characteristics of this confusing diversity. However, comparing figures can easily lead to contradictions and misinterpretations if one does not pay attention to how the figures come about and what the underlying definitions are.

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2 See the presentations by Marion Rose and Claudia Mönnig on the Docu CD-ROM.



Even the definitions of “small and medium-sized enterprises” are not uniform.<sup>3</sup> SMEs as defined by the Institute for SME Research Bonn (Institut für Mittelstandsforschung) are enterprises with less than 500 employees or less than €50 million in annual turnover. Under the definition of the EU Commission, SMEs must meet the following criteria: a) less than 250 persons employed, b) up to €50 million annual turnover or an annual balance sheet total of less than €43 million, c) (largely) independent.<sup>4</sup> The annual Reports on Vocational Education and Training<sup>5</sup> classify according to plant size categories and therefore look at workplaces connected in space. Thus if the business location of a large corporation employs fewer than 500 persons, it is placed in the plant size category of “fewer than 500 employees”, even if vocational training is managed by the corporation headquarters.

In 2005, more than 78 per cent of all employees subject to social insurance contributions were working in **plants** with fewer than 500 employees.<sup>6</sup> According to data from the Institute for SME Research, about 66 per cent of all employees, not just those subject to social insurance contributions, were working in **enterprises** with a staff headcount of fewer than 500 in 2004. Both figures show the pre-eminent role of SMEs in employment; by comparing the two, however, we can see that the proportions employed by SMEs differ widely depending on the definition.

The figures on the training rate – i.e. trainees as a proportion of total staff – are given in the Reports on Vocational Education and Training only on the basis of plant size category and not the size of the enterprise.

3 Cf. Federal Ministry of Economics and Technology (BMWi) (ed.): Der Mittelstand in der Bundesrepublik Deutschland. Eine volkswirtschaftliche Bestandsaufnahme. Berlin 2007, *ibid.* pp. 9 ff. (Download from the Internet: <http://www.bmwi.de/BMWi/Redaktion/PDF/Publikationen/Dokumentationen/doku-561,property=pdf,bereich=bmwi,sprache=de,rwb=true,pdf>).

4 EU Commission: Commission Recommendation 2003/361/EG of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises, document L 124 of 20 May 2003, pp. 36-41.

5 See, for example, Federal Ministry of Education and Research (BMBF) (ed.): Berufsbildungsbericht 2007. Berlin 2007. Download from the Internet: <http://www.bmbf.de/publikationen/4520.php>. Cf. also the presentation by Jürgen Egeln on the Docu CD-ROM.

6 Berufsbildungsbericht 2007 (see preceding note), Diagram 55 on p. 149.

They show that 80 per cent of all trainees are trained in plants with less than 500 employees.<sup>7</sup>

Despite all the problems of definition, the fact remains that SMEs play a pre-eminent role in employment and initial vocational education and training. Their importance for continuing education and training will be discussed later.

## II. Vocational training in SMEs

As a rule, Training Regulations define a wide spectrum of specialised and non-specialised competence requirements. On the one hand, these are supposed to open up sufficient vocational development opportunities to the trainees, and on the other they create a skills base for the further development of the economy. In many cases smaller businesses providing training are unable to impart the skills required on their own.<sup>8</sup> Inter-company vocational training centres (ÜBS), run by the industries concerned and government-supported, ensure that in the crafts in particular all trainees can acquire the necessary breadth and variety of capabilities, skills and experience (more in Chapter IV). Training cooperation schemes are another publicly supported instrument making training possible for those businesses that are unable to meet the requirements of a Training Regulation on their own.<sup>9</sup>

Several contributions from the Forum give an impression of the training that goes on in the plants.

- The quality of training in craft enterprises in Bremen was analysed on the basis of a survey of trainees.<sup>10</sup>

The rating of businesses with more than 50 employees is above average and that of businesses with 11 to 49 below average, while that of micro-enterprises (up to 10 staff members) is average. It would be interesting to find out why that is so.

7 Details in the presentation by Jürgen Egelin on the Docu CD-ROM. Cf. also Berufsbildungsbericht 2007, p. 148 and p. 208.

8 This can also be the case, however, for larger companies with a specialised range of services; see the contribution by Tino Bachmann for Working Group 5.3 on the Docu CD-ROM.

9 See the contribution by Tino Bachmann for Working Group 5.3 on the Docu CD-ROM.

10 See the presentation by Eva Quante-Brandt (Working Group 5.2) with further references.

- The example of the media service provider and producer Laudert<sup>11</sup> shows the limits of learning in response to a customer order: Media products often have to be developed and produced under heavy pressure of time, leaving no margin for the participation and monitoring of beginner trainees. First-year in-company training in Laudert's company therefore takes place primarily in a company-owned academy.
- The GEPA<sup>12</sup> staff shop shows how trainees in an SME can practice acting on their own responsibility in the operation of the company, up to and including taking on managerial tasks, without requiring much overhead.
- Visits abroad as part of training can promote the international competence of trainees and add to their specialised know-how. In the present example, the organising is done by the inter-company vocational training facility (ÜBS).<sup>13</sup>
- Croatian specialty restaurants in North Rhine-Westphalia offer school students information sessions and in-company work practice in order to attract and recruit suitable trainees.<sup>14</sup>
- The JOBSTARTER apprenticeship initiative promotes regional projects to help SMEs carry out training with Federal Ministry of Education and Research (BMBF) resources.<sup>15</sup>

Statistics show that more than half the training places are in the service sector. The hiring rates indicate the extent to which vocational training directly serves to meet recruitment needs.<sup>16</sup>

### III. The continuing education problem in SMEs

Various talks showed what a variety of skills are demanded of SME staff these days.

- The customer expects of the printing and media business not just that typesetting and printing jobs are completed on time, but made-to-measure solutions and comprehensive services from the conception and design to the timely distribution of

11 See the presentation by Claudia Mönnig (Working Group 5.4) on the Docu CD ROM.

12 See the contribution by Jutta Fuhrmann (Working Group 5.4) on the Docu CD ROM.

13 See the presentation by Frank Pawlik (Working Group 5.4) on the Docu CD ROM.

14 See the contribution by Jerko Cutura (Working Group 5.4) on the Docu CD ROM.

15 See the contribution by Sigrid Meiborg (Working Group 5.3) on the Docu CD ROM.

16 See the presentation by Jürgen Egeln (Working Group 5.2) on the Docu CD ROM.

printed matter.<sup>17</sup> If 20 to 30 per cent of all printing enterprises have vanished from the marketplace since 2002, it could be because they were not equal to these demands of the market.

- Another contributor<sup>18</sup> spoke about the “knowledge intensification” of work and expected SMEs to be at a disadvantage compared to large companies when it came to recruiting university-educated staff.
- A small business in the events management industry shows what is required of the business managers<sup>19</sup>: Not the lack of competence in the field, but shortcomings of the partners with regard to fundamental communication and management competence was the main problem of the company. In particular, they needed to develop their abilities to deal constructively with conflicts, to structure areas of responsibility and to delegate responsibility.

Many of the talks and contributions to the discussion therefore concluded that planned and targeted continuing education and training is indispensable if SMEs are to remain competitive in the face of rapid changes.

The assessment of the present situation with regard to continuing education and training in SMEs was not quite uniform. Analyses of the continuing education and training reporting system indicated that continuing education and training activities increase with the size of the enterprise.<sup>20</sup>

A study from the Bremen region disagrees, indicating that the continuing education and training opportunities of employees do not depend significantly on the size of the enterprise.<sup>21</sup>

The general impression in working groups 5.2, 5.3 and 5.4 was that continuing education and training often takes place only as need arises – especially when new technology is introduced. The heavy burden of day-to-day business, the claim is, leaves no room

17 See the presentations by Marion Rose (keynote speech) and Claudia Mönnig (Working Group 5.4) on the Docu CD-ROM.

18 See the presentation by Jürgen Egel on the Docu CD-ROM.

19 See the presentation by Heinz Eickmeier on the Docu CD-ROM.

20 See the presentation by Marion Rose (keynote speech) on the Docu CD-ROM.

21 See the written contribution by Ottmar Döring and Sven Turnwald on the Docu CD-ROM.

for systematic human resources development, and often the businesses do not see the economic necessity for it; the continuing education scene depends largely on the “common sense” of the company concerned.<sup>22</sup>

Human resources development, according to the thesis stated in two talks, is most likely to have a chance in SMEs if the businesses pursue a definite strategy and qualification planning is integrated in it.<sup>23</sup> Deviating somewhat from that thesis was the demand for better SME-specific and provider-independent continuing education counselling that takes the diverse methods of on-the-job continuing training into account; the state would have to ensure that suitable counselling was available.<sup>24</sup> The INQA Learning Initiative, for example, relies on integral and action-oriented learning concepts and cooperation with interested companies to promote the security and health of the employees.<sup>25</sup>

The “Bildungsscheck NRW” (NRW education cheque)<sup>26</sup> shows how the state (with funding from the European Social Fund, in this case) hopes to promote continuing education for SME employees. Grants are awarded as unbureaucratically as possible, but counselling is obligatory for the employees or companies wanting to benefit from continuing education grants. Programmes like the NRW education cheque often have time limits.

The hope is associated with them that through this incentive those involved will recognise their interest in the measure supported and will therefore “stick to it” in their own interests when the programme ends. That hope is often dashed, however.

The question arises whether it is necessary to “institutionalise”<sup>27</sup> continuing education more than hitherto. In other words: Are the current general institutional conditions for continuing vocational education and training commensurate to their fundamental impor-

22 See the written contribution by Ottmar Döring and Sven Turnwald on the Docu CD-ROM, especially section 2.1.

23 See the presentations by Marion Rose (keynote speech) and Heinz Eickmeier (Working Group 5.3) on the Docu CD-ROM.

24 Ibid.

25 See the contribution by Peter Krauss-Hoffmann and Manuela Sieland-Bortz on the Docu CD-ROM.

26 See the presentation by Uwe Loß on the Docu CD-ROM.

27 See the presentation by Jürgen Egeln on the Docu CD-ROM.

tance for business, employees and society? At the present time, the structuring and quality assurance of what is offered is left mostly to the free continuing education and training market. When employees and SMEs invest time and money in continuing education and training, they often cannot foresee whether their investment will pay off. The question was therefore asked in Working Group 5.3 whether the costs and risks of continuing education investments could be left to the individual employees or SMEs alone or whether they shouldn't be borne in part by the economy and the state. This idea could be concretised in this demand: We need an instrument that, like the inter-company vocational training centres in vocational training, provides qualitative and quantitative safeguards for continuing vocational education.

#### **IV. Inter-company vocational training centres undergoing structural change – Prospects for a strategic realignment**

Offering supplementary qualification for SMEs is the task of the Inter-company vocational training centres, which have existed for about 30 years. They were established when it was realised that small and medium-sized enterprises, because of their work processes and specialisation, were often unable to impart the whole range of specialised knowledge and skills demanded by the Training Regulations. In view of the social interest in preserving a competitive small and medium-sized business economy in Germany, business and the state and federal governments were prepared to make a financial contribution to the establishment and development of these training centres.

Those operating the inter-company training vocational centres, mostly the chambers of crafts, less often the guilds and district craft trades associations, receive a proportion of their investments in the construction and equipment of their training centres from the federal government (BMBF – Federal Ministry of Education and Research; BMWi – Federal Ministry of Economics and Technology) and from the relevant state government, but have to assume a proportion of the investment costs themselves and cover the operating expenses. The inter-company apprenticeship schooling (ÜLU), if the courses are recognised by the BMWi, is subsidised at the

elementary stage (first year of training) by the state government and at specialisation level (2<sup>nd</sup> to 3<sup>rd</sup> or 4<sup>th</sup> year) by the BMWi. This procedure has proved its worth down through those 30-odd years, and about 700 ÜBS (mostly operated by the crafts) have been set up with public support.

The model of inter-company vocational training (ÜBA) has been successful for three decades in part because, in addition to funding, the subject matter of the inter-company vocational training has been decided in consultation with the federal government and the economy. The formal recognition of inter-company vocational training as an integral part of training makes it more acceptable and valuable for vocational qualification.

There is already a comparable model for continuing education and training: After a sufficient number of workshop spaces had been provided for initial training, the inter-company vocational training centres increasingly began, with approval of the federal government, to assume responsibility for continuing education and training, since the investments in elaborate technical workshop equipment could be put to more profitable use by providing supplementary evening and weekend courses.

The assumption of adult training functions, the latest technological equipment, highly qualified teaching personnel to match, and the proximity of the training centres to the businesses enabled the inter-company vocational training centres to assume a special role in supporting human resources development in the SMEs. They evolved from training centres into modern educational service providers.

The federal government purposefully supported that development by means of its 2001 incentive programme for the development of inter-company training centres into centres of excellence. Centres of excellence are training centres that assume a position of primacy in a specific field and preserve it and expand it through contacts with research institutions, colleges/universities and manufacturers that transform R&D into innovative products and procedures. Centres of excellence provide producer-neutral specialised counselling, demonstrate new technical apparatus and procedures to

small and medium-sized enterprises on the job and offer qualification “made to order”. Their closeness to the enterprises is not just spatial, they know everyday company life through their trainees, they work closely with the company and training counsellors of the chambers, and the staff of the centres of excellence themselves are often members of the examining boards or expert committees. The qualification they offer can be shaped to fit practice, they are “just in time” and can be integrated into the actual work process through Internet assisted learning opportunities and through workplace or customer access to the know-how of the skill centre. The solution is offered where the problem arises.

Working group 5.1 dealt with that subject area. The first contribution<sup>28</sup> used an example from the plasterer’s trade to explain how new insights find their way into company practice through appropriate training and thus improve company success at the same time. The success for the plastering company resided in the drop in the number of complaints (whereby the employer had less financial losses owing to the drop in warranty claims), because defects in construction could be avoided through a better understanding of the laws of structural physics. The number of orders grew with the company’s reputation, as did the entrepreneur’s appreciation of the value of training measures and his willingness to invest in human resources development.

The second contribution<sup>29</sup> dealt with the fundamental changes in structure, role perception and approach to customers that a training centre has to master in order to recognise the training needs of companies as an education service provider and be able to develop and market adequate continuing training offers.

The third contribution<sup>30</sup> presented the cooperation between the centre of excellence for future-oriented building in Hamburg, the specialised department of the vocational school and the Hamburg-Harburg Technical University in erecting special types of buildings. The confrontation between specialised planning (students of the Technical University) and practical implementation (trainees at

28 See the presentation by Dr. Roland Falk on the Docu CD-ROM.

29 See the presentation by Thorsten Janßen on the Docu CD-ROM.

30 See the presentation by Rainer Palm and Britta Stein on the Docu CD-ROM.



the inter-company vocational training centre) under the theoretical guidance of vocational school teachers, planned as the realisation of an integral training concept and in the end successful, revealed first of all the kinds of misunderstandings and sources of error that are characteristic for complex company practice. Promoting understanding in all those involved of the basics of structural physics, the need for inter-trade consultation and proper and practical planning is precondition for the requisite training in the construction process. This cross-cutting task has not yet been given enough attention in initial and continuing training. The centre of excellence and its partners are doing a job that is equally important for company success and for the protection of the environment.

The other contributions<sup>31</sup> made it clear that inter-company vocational training centres and centres of excellence are in a position to take on other educational tasks as well, such as vocational guidance measures, the development of supplementary qualifications and the development of learning media. They thus make specific contributions to promoting human resources development in small and medium-sized enterprises.

The proceedings of Working Group 5.1 can be summarised as follows:

1. There is a growing need for training in small and medium-sized business as in society as a whole.
2. Small and medium-sized enterprises must be able to discern the value of training directly so that continuing training offers will be accepted.
3. Inter-company vocational training centres with their ultra-modern workshops, their pedagogically trained staff and their knowledge of everyday company operations have good preconditions for helping SMEs in coping with technological progress and the training needs that it generates.
4. Centres of excellence also possess know-how and tools for offering human resources and organisational development, demonstrating new technologies and methods and providing manufacturer-neutral information on the opportunities and risks of innovations. Their training measures, embedded in counsel-

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31 See the contributions of Gabriele Rau, Wolfram Brecht and Dr. Jürgen Jarosch on the Docu CD-ROM.

ling and information and geared to the immediate needs of the company concerned are therefore all the more acceptable to small and medium-sized enterprises the more they speak “the same language”.

5. Inter-company vocational training centres and centres of excellence are in a position to assume additional training tasks.

## V. Prospects

The core problem for SMEs, in the opinion of a wide range of speakers, is human resources development and continuing development. In view of the importance of continuing training for the companies and the employees, the question of institutionalised safeguards for continuing training arises; time-limited incentive programmes alone cannot resolve this problem.

Inter-company vocational training centres and centres of excellence have proved their suitability as providers of training measures for SMEs. Their proximity to practice and their special range of services enables the centres of excellence to play a greater role in continuing training as well.

The “inter-company vocational training” model could be the starting-point for thinking about creating a demand-oriented, stable and flexible continuing training offer for small and medium-sized business in cooperation between state, business and social partners.



# Forum | 6

## **Sustainable development in vocational education and training**

Coordination:

*Dagmar Winzier*

*Dr. Klaus Hahne*

- How pilot projects support the implementation of the model of sustainable development
- The Good Practice Agency: Sustainability in vocational education and work – Learning from good examples
- Sustainable development in vocational education and training – Contributions and effects of vocational education research

## Forum 6

### **Sustainable development in vocational education and training**

Sustainable development is a protracted, complex process and a contradiction in terms. It is not easy to reconstruct or shape it, since diverging interests such as profitability and social or ecological entitlements have to be taken into account. Nevertheless an attempt should be made to accord sustainable development the importance that is its due.

Sustainable development is meant to satisfy the basic needs of all people without going beyond the limits of what the earth can bear. It is meant to preserve, protect and restore the health and integrity of the earth's ecosystem and ensure that future generations can satisfy their needs as well.

To satisfy those requirements, global, national, social and individual implementation strategies have to be developed, expanded and implemented. Vocational education and training plays an important role in this. The model to which a Vocational Education and Training for Sustainable Development (Berufsbildung für nachhaltige Entwicklung – BBNE) is dedicated here can only be seen as an adjustment factor, however, the implementation of which must be developed and borne individually.

Sustainability in vocational education and training can be understood in two ways – on the one hand in the sense of sustainable effectiveness of vocational education measures, that is, primarily from the point of view of the successful transfer of innovations and lasting effectiveness of vocational teaching and learning processes; and on the other as an overall concept for integrating the demands of sustainable development into vocational education and training.

The speakers cast light on the various aspects of the sustainable development model from their own points of view, while attaching special importance to vocational education and training.

## Plenary session: A model gains acceptance – Inventory, effects and contradictions

A representative of the German Federal Foundation for the Environment (Deutsche Bundesstiftung Umwelt – DBU) pointed out that the implementation of (vocational) education for sustainable development can succeed only if a common path is taken. The DBU, the representative said, therefore promotes various projects, from the field of “school and economy”, for example, with bringing education stakeholders from different fields and levels into contact with one another as one of its goals. The “good examples” that emerge are documented, in cooperation with the BIBB, in a Good Practice Agency (GPA) and elsewhere and thus made available to those interested.

A representative of the German UNESCO Commission reported on the progress of the UN World Decade “Education for Sustainable Development” and stressed in particular the integrative concept that links together, among other things, environmental aspects and aspects of development cooperation and consumer protection. The activities of the Federal Initial and Continuing Education and Training Working Group (Bundes-AG Aus- und Weiterbildung) are also embedded in it.

How vocational education and training for sustainable development found its way into the logistics industry was the theme of the paper “On the way to sustainability – the changing logistics sector”. For socio-economic reasons, the logistics industry cannot avoid developing a sustainability model for its industry. While there is no magic formula for a sustainable transport policy, some “implementation modules” do already exist for environment-compatible goods traffic. Entrepreneurial and technical innovations, e.g. the implementation of a quality and environment management system, mark further steps towards more sustainability. The successful implementation of a sustainable model in a logistics enterprise must be supported by all staff members. Accordingly, initial and continuing education and training measures are increasingly being carried out that contain aspects of sustainable action and management.

A contribution on the “Berliner Wald und Holz” (Berlin forest and wood) model region showed how BBNE can be implemented in the forest and wood sector.

The “Berliner Wald und Holz” model region is embedded in the BMBF research project on “sustainable forestry”. A cross-cutting project on vocational education and training in the forestry industry deals in particular with identifying qualification needs along the forest-wood value added chain and with the implementation of training measures. The model region with its eight sub-projects is developing and testing concrete qualification implementation steps. These are didactic/methodological concepts from initial and continuing education and training, new forms of cooperation between learning venues and innovative forms of communication and presentation. These activities not only serve to heighten competence and develop a “sustainable” awareness in forest pedagogy and in the forestry and wood business, they also provide a model for other occupational areas of how the sustainability principle can be grasped.

The “contours of a didactics of sustainability in vocational education and training” were discussed by a representative of the BIBB who explained that a didactics of sustainable development in vocational education and training fostered convergence and the construction of one’s own sustainable world outlooks. The core of such didactics, he said, is the practical task of equipping teaching and learning subjects to weigh different needs when faced with complex demands and open conflicts about goals.

A former member of the BIBB staff complained that despite heightened sustainability awareness among the public and a growing willingness of enterprises to deal with the entrepreneurial model of sustainability the implementation often affects only subordinate aspects such as ecology or economics. He also criticised the inadequate sectoral or area transfer of insights and outcomes achieved and called for a balance-sheet of sustainable development in vocational education and training.

There was a consensus in the discussion that it was not enough to make the model of vocational education and training for sustainable development a self-evident component of the teaching of

vocational action competence in initial and continuing education and training processes.

Long-term sustainable behaviour in one's occupation, it was agreed, can only be achieved if sustainability becomes a fact of life in the work processes of enterprises and administrations and thus a component of occupational socialisation.

### **How pilot projects support the implementation of the model of sustainable development**

Pilot projects are an instrument for testing didactic-methodological concepts and concepts for the organisation of education. The pilot project partners participating (pilot project sponsors, scientific support, technical and organisational support) cooperate closely with one another for that purpose. The combination of research, evaluation and quality assurance has proved valuable in evaluating and implementing the concept. To stabilise and renew vocational education and training, feedback to the reference systems of education, business, science and politics is necessary. The series of pilot projects on "vocational education and training for sustainable development" (BBNE) also move in this tension zone.

Since 2000, economic pilot projects supported by the BMBF with the focal theme of "sustainability" have been managed in the BIBB. The current education policy reference (United Nations Decade of Education for Sustainable Development, 2005–2014) and the great innovation potential inherent in this theme were a precondition for carrying out the pilot project series.

If one calls to mind the model of sustainable development formulated by the so-called Brundlandt Commission, namely to manage one's affairs and act in such a way that one's own needs are taken into account but the quality of life of future generations is not unreasonably curtailed, then one can easily imagine how hard it can be to develop and pursue sustainable goals. In the interplay of ecological, economic and social aspects and their interactions, tensions and contradictions inevitably arise that stand in the way of a homogeneous implementation concept.



The goal of the pilot projects focusing on “sustainability” is to develop strategies for implementing sustainable vocational education and training. The multilayered and complex character of the theme is reflected in the different approaches by which one tries to implement BBNE strategically and methodically. The pilot projects presented can be roughly subsumed under three aspects:

- Sustainable development as an economic factor and management strategy in industry and the skilled trades,
- energy efficiency and resource conservation and
- sustainability in vocational training.

A contribution about supportive research and transfer in the context of pilot projects was presented.

The first aspect, “Sustainable development as an economic factor and management strategy in industry and the skilled trades”, was highlighted in four different contributions.

In the pilot project on “Developing and testing a continuing education and training concept for sustainable management as a chance for the future of skilled trades”, a modular and inter-trade structured qualification and counselling concept was developed and tested with craft enterprises. The concept is viable particularly because it advantageously links qualification with counselling and thus provides starting points for heightening willingness to provide continuing training in the crafts. The modular structure and the openness of the concept also make it possible to arrive at other continuing education and training needs with different groups of craft enterprises which can then be served from the range of continuing education and training offered by the providers of craft education and training ([www.handwerk-agenda21plus.de](http://www.handwerk-agenda21plus.de)). The qualification and counselling concept also entered into the pilot project on “Sustainable management as innovation management in SMEs”.

The “Habina” pilot project deals with the topic of energy efficiency in existing buildings. The example of building insulation is to be used to show how sustainable teaching and training material can be integrated into the curricula, the initial and further training regulations and the examination regulations. The interest of trainees and enterprises in vocational education and training for sus-

tainable development has to be aroused in order to improve the training situation.

Company practitioners are to be persuaded to implement sustainable development strategies so as to be able to stimulate and satisfy demand on the part of the customers. This pilot project is being monitored scientifically by the University of Hamburg ([www.hwk-hamburg.de/projekte/ausbildung/habina.php](http://www.hwk-hamburg.de/projekte/ausbildung/habina.php)).

The goal of the pilot project on “Promoting sustainable action by middle management – Developing subject-related and inter-subject competences for the sustainable organisation of production processes with the aid of computer simulated production scenarios” is to make the vocational stakeholders, especially all foremen, aware of their own responsibility within their spheres of vocational action by simulating a complex foundry process chain. The simulation method gives the trainees vivid and comprehensible access to a complex system. The learning can take place independent of time and location, and the possibilities of continuous skills development are improved through individualised learning times and learning venues.

The pilot project “Quaspo – Development of a qualification system for sports complex managers and staff for the orientation of sports facilities in accordance with Agenda21” ([www.quaspo.de](http://www.quaspo.de)) has developed a modular continuing education and training concept for sustainable sports complex management that is taught in the form of “blended learning”. The modules developed in the pilot project will be offered as e-learning courses on a learning platform ([www.impulse-lernzentrum.de](http://www.impulse-lernzentrum.de)). In addition, an attempt is to be made to introduce selected training content into regular initial and continuing professional sport and sport-related training.

The pilot project on “Renewable raw materials – Strategies for modernising rural areas with viable qualification concepts” was also presented under the heading of “Energy efficiency and resource conservation”. This pilot project supports the development of additional regional value added possibilities for agriculture and forestry, market gardening and the processing economy as well as the crafts ([www.nawaro-bildung.de](http://www.nawaro-bildung.de)).

The NaWaRo Study Group emerged and is offering elementary and advanced courses on “Biogas – Planning for Your Farm” in cooperation with the HessenRohstoffe (HeRo) centre of excellence and other stakeholders. Together with the Crafts Chamber Education Centre, Munster, four advanced training modules are being offered using blended learning methods and leading to the “Biogas service specialist” certificate. The advanced training course on “Fundamentals of energy wood provision and marketing” has been running since 2006.

The energy-related renovation of existing buildings was the topic of another talk. Renovation offers the greatest potential for energy-saving and hence for achieving the climate protection targets. At the same time, it places new demands on the competence of the skilled building workers doing the work.

Three other contributions dealt with “Sustainability in vocational education and training”.

The pilot project “ErNach – Erhöhung der Nachhaltigkeit in der beruflichen Bildung bei Nutzung und Förderung von Begabungen junger Menschen” (Increasing sustainability in vocational education and training while utilising and fostering the talents of young people) has the purpose of sensitising trainees in new IT and electrical occupations and media design in small and medium-sized enterprises (SMEs) in Thuringia to the subject of sustainability and imparting skills and key qualifications of vocational education and training for sustainable development.

The pilot project “NICA – Nachhaltigkeit in der Chemieausbildung” (Sustainability in Vocational Training for Occupations in the Chemical Industry) with its four sub-projects covers the realignment in content and didactics of the training modules for training in the chemical industry occupations, the development of a criteria and indicator model to measure sustainability, the establishment of a sustainable learning and experience space (House of Nica) and the certification of the Rhein-Erft-Akademie as a viable education and training enterprise ([www.nachhaltig-berufsbildung.de](http://www.nachhaltig-berufsbildung.de)).

In the pilot project “Fit for a Long Time Car”, a process and innovation supporting competence management strategy for the initial and continuing education and training of skilled workers in the ecologically oriented manufacture of transport equipment as well as a handbook on organising sustainable learning in vocational education and training were developed. Continuing education and training modules for sustainable process design in the thematic areas of ecological accounting and recycling were also worked out and tested ([www.stz-zwickau.de](http://www.stz-zwickau.de)).

Supportive research and transfer in the context of pilot projects have the function, one of the speakers said, in view of the complex, often contradictory components of a BBNE, of linking the scientific support of pilot projects with other institutions and groups of actors and stabilising it as well as ensuring the flow of information and communication. In a system-oriented view, design research, science-related services, cooperation with the programme sponsor in developing framework conditions for the pilot projects and the profiling of research and development on vocational education and training for sustainable development could represent an adequate description of the range of tasks of scientific accompaniments for pilot projects.

The pilot projects related to vocational education and training for sustainable development show how complex states of affairs can be digested and taught and how the general principle is found precisely in the prototype. At the same time the learning effects triggered by learning processes and behaviour patterns must not be underestimated either. Pilot projects therefore continue to be a valuable instrument for fostering innovations in vocational education and training.

### **The Good Practice Agency: Sustainability in vocational education and work – Learning from good examples**

Learning from good practice is a promising strategy for propagating and concretising the model of sustainable development in vocational training and in work. Learning from good examples, that is, learning from models, is a learning concept with a long tradition.

And yet the concept is still modern, especially when it is a matter of putting life into new complex and abstract situations, such as vocational education and training for sustainable development.

Good examples should supply answers to this question: How can or should something be done? It is no one's intention to imitate examples or transfer them one to one, however. The idea is rather to transport an abstract concept, such as sustainable development, by means of examples that serve as stimuli for further implementation ideas from which in turn new examples emerge and so on, so that vocational education and training for sustainable development is gradually propagated and at the same time concretised.

Behind this is a process model that presupposes that many stakeholders join in. It requires participants who generate ideas and want to make them known to others. It requires an agency that collects such examples, processes them and makes them available to others through various channels. And it requires interested people who are prepared to take up the suggestions contained in the examples, integrate them into their own education and training practice and generate examples of their own which in turn are made available to others.

In this process, some questions must be clarified, such as

- Who generates good examples?
- When is an example a good example?
- Who collects good examples, processes them and makes them available to interested persons?
- How do good examples get to the "collection point"?
- How must good examples be propagated so that they actually arrive at the practice level?
- Under what conditions do good examples lead to suggestions and changes in practice?

Following up on the first beginnings of vocational environmental training, the establishment of the Good Practice Agency *Sustainability in Vocational Education and Work* (Nachhaltigkeit in Berufsbildung und Arbeit – GPA NiBA), designed to initiate and shape that process as the central place to turn to, was started two years ago in the framework of the NiBA meeting in Bad Godesberg. In

the meantime, more than 100 examples from actual practice as well as a large number of teaching and learning aids have been documented; stakeholders' conferences have been held, theme-related working groups initiated and regional and supra-regional alliances to accompany the UN Decade of Education for Sustainable Development supported.

After two years of work, it is time to make an interim evaluation and ask about effects, hindrances and future action requirements.

The working group dealt with four focal themes:

- an interim evaluation of the work done by the GPA NiBA so far,
- the presentation and assessment of good examples from enterprises, schools and continuing education,
- the discussion of criteria for good examples and
- the question of the conditions for successful transfer of good examples.

The introductory speech drew an interim balance of the work of the Good Practice Agency up to then.<sup>32</sup> It sees itself as an information and communication hub that takes on extensive organisational tasks as well. "Active transfer" and systematic networking are of central importance. The GPA NiBA documents the current state of vocational education and training for sustainable development. The focus is on the improvement of information about successful practice, suitable materials and already existing initial, advanced and continuing training courses. The basis is the BIBB information portal set up under [www.bibb.de/nachhaltigkeit](http://www.bibb.de/nachhaltigkeit). To foster cooperation among relevant stakeholders, structures to concretise and further develop the model of sustainable development in vocational education and training in a theory/practice dialogue are being initiated or expanded. Building on existing communication structures, such as the Federal Study Group on Initial and Further Training in the UN Decade and stakeholders' conferences and thematic working groups, the creation of direct discussion and work opportunities and the building of a virtual community (NiBA network) are of particular relevance.

32 The GPA NiBA is currently being built up by the BIBB in the context of a three-year incentive project of the German Federal Foundation for the Environment (DBU) with the support of the Institute for Environmental Protection in Vocational Training (IUB), Hanover.

What has been achieved so far? In the meantime, more than 120 examples from actual practice have been documented in a uniform structure and sorted by action field in the BIBB sustainability platform ([www.bibb.de/nachhaltigkeit](http://www.bibb.de/nachhaltigkeit)). The examples are linked with teaching and learning aids; a search function makes orientation easier. The GPA NiBA has attended meetings, etc. and held a number of stakeholders' conferences as well as information and qualification events. The NiBA network, which now has 560 registered users, is available for, among other things, virtual cooperation in forums and working groups. There are problem areas as well, however. The GPA is still little known, for example, the services are not in demand and virtual cooperation in the NiBA network is limited to a few areas.

The task of the Learning Region Gifhorn<sup>33</sup> project was to set up a regional education centre for sustainability (REBINA). In cooperation with a manufacturing enterprise in the region providing training, a five-day entry-level module for the first year of training and, building on the entry-level module, a two-day as well as a three-day module for the following years of training were worked out, tested and evaluated. The themes included nature exploration, energy use in the home and at the workplace, use of resources and opportunities to conserve resources at work. In each case the content was linked with the work and home situations of the trainees and with complex methods and organisational forms, such as role playing and management games, experiments, simulations, project work and exploration of the environment.

In the judgement of all participants the modules went very well and raised the awareness of the 34 participating trainees and the staff cooperating with them and led to changes in the company. REBINA was honoured in 2005 and 2007 as an official project of the United Nations Decade of Education for Sustainable Development.

“Fair handeln in Unterricht und Sportprogramm” (Fair play in classrooms and sports programmes) was the title of a contribution in which interdisciplinary projects on product ethics were

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33 This is a part of the BMBF's “Lernende Regionen – Förderung von Netzwerken” (Learning regions – fostering networks) programme, supported by the Federal Ministry of Education and Research (BMBF) and the European Social Fund (ESF).

presented. In the projects, the key skills and competences are to be fostered that put trainees in a position to pursue their further training on the theme of sustainability and social responsibility on their own. With the help of concrete examples, such as fair-trade orange juice, coffee or footballs, the learners are led to take interest in the product and the conditions of its production. This is not limited to the classroom but is taken outside, in the form of actions in enterprises, supermarkets and town fairs, for example. Among others, the school was instrumental in having the fairly traded “Hannover-Kaffee” put on the market.

The “BNE in continuing education” project co-ordination in the Neumünster-Mittelholstein continuing education and training network presented a course of further training for continuing education teachers and trainers in Schleswig-Holstein on the model of sustainable development.<sup>34</sup> The course, structured as a multiplier’s further training course and interpreting sustainable development as viability, consists of three two-day modules. In addition to theory, background, didactics and methodology of education for sustainable development, the topics of “work” and “organisational change” are dealt with as application topics.

From the point of view of both the participants and the project team, the interdisciplinary and modular concept proved a success. One also succeeded in introducing the model into continuing education and training in Schleswig-Holstein and thus getting new groups of persons interested in education and sustainable development and in further and continuing education. The project had already had an effect as a model and inspiration. In February 2006 the project was honoured as an official United Nations Decade project, and that also proved very helpful for its propagation.

In the final discussion in the working group, preconditions, reach and demands for learning from good practice were discussed. The GPA NiBA was identified as an important instrument for fostering vocational education for sustainable development that needed to

34 The course was developed and tested in cooperation with the Akademie für Natur und Umwelt of the State of Schleswig-Holstein, the bfw – Unternehmen für Bildung – Berufsbildungswerk Neumünster and the Grone-Schule Schleswig-Holstein gGmbH, Bildungszentrum Neumünster in the context of a pilot project of the Ver.di-Forum Nord e.V., supported with funds from the Ministry of Science, Economy and Transport of the State of Schleswig-Holstein.



the extended and stabilised. The BIBB was called upon to see the GPA as a strategic tool and to use the GPA more intensively than hitherto for the documentation, systematic processing and propagation of its own sustainability activities.

### **Sustainable development in vocational education and training – Contributions and effects of vocational education research**

First of all the working group asked itself what was to be understood by vocational education and training research for sustainable development. It was emphasised that both pilot projects and other research and development concepts dealing with the topic remained loyal to the traditional understanding of vocational education and training research, that is, they refer directly to the structures, processes and organisational aspects of vocational education and training. It is constitutive for these projects that they confront the normative power of the actual (present state) with the normative, regulative idea of sustainability (target state).

The idea of sustainability still seems like a foreign body in vocational education and training research, because current vocational education and training research is centred on such topics as international comparisons of educational standards, quality development and quality assurance. One of the reasons is presumably the sustainability idea itself, because it stands out for being complex, multidimensional, inter-functional, and process and communication oriented. Moreover, the system of vocational education and training is closely connected with the employment system and the economic system. It therefore proves to be a dilemma that although every large enterprise today produces an environmental report or sustainability report and an entrepreneurial model of sustainable development is seen as desirable, decisions about the extent to which ecology takes effect are made on the basis of quite different considerations, of profitability or job security, for example.

Also, the introduction of organisational competence uncoupled questions of content from process-oriented questions. A fit between vocational education and training and social development

therefore has to be found. Thus the focus is on goals and content first and suitable ways and means later. In addition, educational policy and education-relevant indicators/standards for sustainable development that are supposed to lead to the “sustainability certification” of vocational education centres have not yet been tested so that they can be modified and amended as needed.

On top of that, vocational education and training research is in the Catch-22 situation that the idea of sustainability is connected with the demand for a new understanding of economic management detached from the traditional model of growth and progress. What is wanted is a new substantive and methodological understanding of an economy that gives equal attention to the ethical, political and scientific aspects.

A representative of the Klaus Novy Institute in Cologne gave an overview of the business practices of the craft trades in selected industries and outlined models for a strategy of sustainable development in the crafts.

In the NICA pilot project already mentioned, an indicator and key figure system is being developed to determine the sustainability of enterprises. The “House of NICA”, which was developed by a “trainee business”, will serve as an example of sustainable project work at the end of the pilot project and show how the training targets are realised in practice.

The paper on “Tools for sustainable vocational education and training research” exemplified the insights into sustainability, globalism and interculturalism that can be arrived at using vocational science methods. Very close scrutiny of the real world of work, the paper said, is needed to identify starting points for developing the idea of sustainability in vocational education and training. What is needed is skills development that keeps sustainability in mind. If one is to be successful here, substantial preliminary curricular and didactic work needs to be done.

Another paper came to the conclusion that sustainable economic management concepts can only have a chance of being integrated into the processes and structures of individual enterprises if the

ecological and social activities in the enterprise can be linked with economic success. If this business condition is met one speaks of *Business Cases of Sustainability*. For the regional tourism business, such sustainable business cases can be developed quite concretely. Such concepts of sustainable business management demand creative solutions that can only be developed by competent staff in the tourist enterprises. In connection with vocational education and training for sustainable development in tourism, therefore, concepts are in demand whereby learners are enabled to help shape the development of sustainable tourism.

## Outlook

According to the United Nations World Decade of Education for Sustainable Development (2005 to 2014), the principles of sustainable development have to be anchored in the national education systems world-wide. That was confirmed by the European Union in its renewed EU Strategy on Education for Sustainable Development (2006). Education should contribute to ensuring equal opportunity for everyone, promoting the knowledge society and heightening the competitiveness of the EU. The strategies for realising “sustainable” goals are set forth in the national action plan of the Federal Republic of Germany. Education for sustainable development is aimed at the further development and bundling of activities and the broad-based transfer of good practice, the networking of education stakeholders, the improvement of public perception and the strengthening of international cooperation.

In the field of vocational education and training for sustainable development, however, the issue is the effectiveness of vocational education and training measures on the one hand and an overall concept for integrating the demands of sustainable development into vocational education and training on the other.

Like hardly any other thematic field, vocational education and training relies on the concept of sustainability being filled with technical content to remain viable. Consequently the Forum dealt with the effects of sustainability strategies worked out on vocational education and training and work. There was a consensus

that it was not enough to make the model of vocational education and training for sustainable development a self-evident component of the teaching of vocational action competence in initial and continuing education and training processes. Long-term sustainable behaviour in one's occupation, it was agreed, can only be achieved if sustainability becomes a fact of life in the work processes of enterprises and administrations and thus a component of occupational socialisation.

In the three working groups, there was consensus on the following points:

- Sustainability is everyone's business and will have to play an ever more important role in vocational education and training in the future.
- It is necessary to integrate sustainability into vocational education and training; that applies to all occupations and all levels of education.

The results of the pilot projects show that vocational education and training for sustainable development cannot be passed on by means of instruction. BBNE must be designed so that it can be experienced, that is, over and above vocational action competence, persons active in their vocations have to be actively involved in the work, organisation and production process so as to recognise their own responsibility in their field of work and accordingly to act sustainably. For the success of a pilot project even beyond its term that means that the newly acquired knowledge and the resulting education and training measures can only be explored, arranged and validated in a cooperative dialogue with the participation of those actually practicing. This recursive process includes informal knowledge.

The findings from the (presented) pilot projects on sustainability also show that

- they will enter or have entered the continuing education and training landscape, but the propagation still has to be (institutionally) supported and fostered;
- a decision has to be made regarding how modules that have emerged are to be integrated into vocational education and training taxonomy (supplementary qualifications, possible [par-

- all findings have to be systematically processed so as to stabilise BBNE in the vocational education and training landscape.

The proceedings of all working groups and the plenary discussion suggest that the vocational education and training for sustainable development programme should be used as a comprehensive modernisation strategy in vocational education and training and a corresponding differentiation should be undertaken. That includes all levels of vocational education and training: vocational education policy and vocational education taxonomy (macro level), institutions such as enterprises, education providers, vocational schools and others as well as regional networks and learning venue cooperative schemes (meso level) and concrete working and learning situations (micro level).

It was also suggested that a development programme on vocational education and training for sustainable development be started in order to place vocational education and training for sustainable development on a broader base. In that connection special importance was attached to greater cooperation among the vocational education and training stakeholders, especially the social partners. In addition, it was considered necessary to further expand and stabilise existing tools such as the Good Practice Agency and to develop new, innovative tools.

## Changes in learning culture

Coordination:

*Michael Härtel*

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- Process – Experience – Learning: Reflecting on the essential aspects of three pilot project programmes
- Distance learning today – Developments, approaches, trends
- New learning cultures and new media – Challenges for teaching staff
- Skills development and the capacity for reflection in change processes

## Forum 7

### Changes in learning culture

The recommendations of the Education Board on the Structure Plan for the Education System (1970) already contained the passage “It should not be seen as the goal of vocational training solely that individuals can carry out specialised activities in the occupational world but equally that they dispose of general abilities such as the ability to recognise correlations, to act autonomously, to cooperate and to bear responsibility. As a matter of principle the learning process is seen as a unit in which general and vocational or practical and theoretical education cannot be isolated from one another.” That vision was decisive in bringing about a serious change in learning culture. After more than 35 years, it has in large measure become reality and is still goal-defining, for changing learning culture is an ongoing process.

What makes the subject so topical? Because of changing demands and possibilities, the learning cultures in the enterprises and educational establishments have to be developed further to ensure competitiveness. The process orientedness that is becoming evident in the new, configurable Training Regulations and in the continuing education and training concepts and is already practiced in part is of crucial importance in this. Work process-integrated and work process-oriented training models provide scope for formal and informal learning. In addition, the deployment of digital media and workplace-integrated information management and knowledge management make formal and informal e-learning possible to supplement and in part to replace other, traditional ways of learning.

In many places these new approaches collide with existing imaginings, past experience, organisational forms and legal provisions. The Forum therefore asked itself questions about how educational staff dealt with the change in learning cultures, how they contribute to quality development in vocational education and training and what consequences needed to be drawn at the system level.

The Forum gave close attention to the organisation of vocational education and training at its implementation level, that is, with vo-

cational education and training at the individual learning venues, including distance learning. Organisation, teaching, learning and media concepts were presented and discussed with the help of examples. Transfer possibilities for mass use scenarios in day-to-day business were also shown.

The following theses were put before the Forum for structuring the content of the discussion.

**Learning culture change is primarily teaching culture change.**

Learning culture change is a process that is triggered by and depends on changing economic and social framework conditions. It is based essentially on the adaptation and realignment of teaching and learning by changing teaching and learning styles within the education system, but it is influenced by factors outside the education system as well. This leads to changes in ways of learning and learning behaviour, even outside organised teaching and learning processes, and hence to a different learning culture.

**The present education system does not adequately satisfy the demands placed on a viable learning culture.**

A viable learning culture is characterised by a high degree of autonomy, decision-making competence and above all independent learning competence on the part of the learners and is a precondition for coping with complex vocational, societal and social challenges. That is, it can help ensure employability, participation in social processes and orientation in an increasingly complex everyday world. The teaching and learning practices in individual stages of education (early childhood education, elementary school, lower secondary and higher secondary education, including vocational education and training) encountered at the operative level do not yet meet those demands, despite the efforts at the system level, for example the recommendations of the Education Forum ([http://www.forumbildung.de/files/empf\\_27-11-A-B.pdf](http://www.forumbildung.de/files/empf_27-11-A-B.pdf)).

**Process orientedness and knowledge management in vocational education and training are features of a changing teaching and learning culture.**

The curriculum framework of the restructured training occupations provides a basis for process orientedness in training. There



are substantial shortcomings in the breadth of in-company training practice, however, caused mostly by the lack of willingness to change and lack of opportunities for change on the part of those involved in vocational training. Pilot projects have shown, for example, that opening up the learning and shaping potentials of work tasks for competence development is inconceivable without developing sophisticated forms of work process oriented learning, without didactic preparation and without support and monitoring.

In that context, knowledge management is a part of process orientedness and turns out to be a complex process that combines individual and team learning, job engineering and organisation development. In-company knowledge systems must be underlain with in-company learning systems. Empirical learning, reflection, continuing education and knowledge management are directly related. The salient features are the application orientedness of learning and the participation of those involved. The examples already tested in pilot projects demonstrate that diversified conceptual and methodological know-how can be made available to vocational education and training for introducing process orientedness and knowledge management.

### **New media are an integral part of a new learning culture.**

New media (digital media) are increasingly in use in vocational education and training as means of information, teaching, learning and working and as knowledge management tools. But the quality and quantity of their use is far from commensurate with the possibilities. Examples of good practice show how learning culture change can be hastened through the use of new media. Technological developments have now made possible what are called Web 2.0 applications and thus opened up additional possibilities of self-organised informing and learning in the process of work.

### **Learners become "teachers".**

"Web 2.0" technologies are an expression of and driving force behind changes in individual learning behaviour and in learning culture. They favour informal learning and are based on the ideal of cooperation and knowledge sharing between partners. They en-

able learners to depart from their role as consumers and shape learning scenarios in an active and self-organised manner. This does away with the strict separation of the roles of teachers and learners.

**Distance learning profits from network-assisted technologies available as needed.**

The number of distance learners in Germany is growing. This is particularly the case for the 25 to 30-year-olds, a group with potential for the future. This development goes hand in hand with a change in the product format, in that traditional print media are increasingly supplemented by network-assisted electronic media – for imparting subject matter, for coaching participants, for the communication and cooperation of learners among themselves all the way to the holding of tests and examinations.

The acceptance and hence the dissemination as well as attractiveness and effectiveness of e-learning is determined by the extent to which one manages to build on the realities of work and life, existing (informal) knowledge and the resulting concrete needs of learners and organisations.

**Situations of change and upheaval in enterprises and among education service providers are occasions for learning, competence development and reflection.**

In recent years, enterprises and education service providers have had to come up with their own organisational development and new action strategies to deal with the consequences of social, political and economic change. For enterprises, this is seen, for example, in the increasing externalisation and networking of initial and further training activities in cooperation schemes and networks, while education providers (have to) develop from more supply-oriented continuing training providers profiting greatly from the publicly funded continuing training market into customer-oriented or demand-oriented education service providers.

These situations of change and upheaval lead to different work organisation forms, processes and communication pathways and can be successfully tackled only with competent staff.

**Competence development in situations of upheaval is supported by moderated phases of reflection and the appropriate tools, such as reflection workshops or coaching concepts.**

Situations of change and upheaval are the occasion and the object for developing the competence of the stakeholders affected in the enterprises and in the institutions providing educational services. It is decisive for the action of the educational personnel that they take up the empirical and process knowledge and moderated reflection of experience so that they can use it continuously for developing competence.

### **Plenary session: Modern learning and working conditions of the future – breaking down the barrier between formal and informal learning**

The plenary session took an education biography and occupation biography approach, beginning with early childhood education and extending through the general school field to initial and continuing vocational training. By way of introduction, the continuing IT education and training concept was presented. Examples were given to show what is needed from the point of view of initial and further training in the way of learning culture change in order to ensure employability as seen by the enterprises and employees. The digression into early childhood education that followed was illuminating. The fundamentals and principles of early childhood education were presented. The essential influence of early childhood education on one's later learning behaviour and social behaviour became apparent. At what point institutional education should supplement family education remained controversial. A representative of the schools of general education described on the basis of the learning culture at her school, an upper secondary school in Oberhausen, and using related examples from various projects how differently education has to approach the different age groups, methodologically and didactically. More attention to the education biography approach to the learning culture discussion was demanded.

## **Process – Experience – Learning: Reflecting on the essential aspects of three pilot project programmes**

In the working group, results from the pilot project priority fields “Process orientedness in initial and continuing vocational education and training” and “Fostering and using in-company knowledge potential” (a total of 28 projects) and from the current research project on “Reflexive meta-evaluation of three pilot programmes involving in-company learning” were presented. Aspects of collective skills development in connection with the organisational perspective were given special emphasis.

The development and research papers showed that “knowledge sharing” and “process orientedness” are features and indicators of a changing learning culture in organisations. The growth of explicit knowledge goes hand in hand with an upward revaluation of implicit and informally acquired knowledge, which has to be brought into an appropriate balance with explicit knowledge. Real work processes and business processes serve as benchmarks for “knowledge management”. Process orientedness meanwhile is seen not just as a leitmotif of work organisation and enterprise structuring but also as the core of the occupational concept in restructured and new occupations. Dealing with knowledge turns out to be a complex process that combines individual and team learning, job engineering and organisation development.

Production systems and the related knowledge systems have to be supported by in-company learning systems. They supplement one another and by means of communication they ensure staff information flow even beyond plant locations. The production knowledge and process knowledge of the players is processed in a learning-oriented manner, stored electronically and made available with the aid of computer terminals directly at the workplace where the qualification of those working there is taking place. New media and virtual platforms as integral parts of learning and organisation culture are just as indispensable in this process as personal contact.

Learning is problem-oriented and cooperative. The salient features are the application orientedness of what has been learned and the participation and frequent feedback of those involved.

Opening up the learning and shaping potentials of work tasks for competence development is inconceivable without developing sophisticated forms of work process oriented learning and without didactic preparation, monitoring and support. Middle and lower management (trainers, continuing education and training officers, and group managers) are needed here as learning tutors. They have to learn to link the many forms of informal learning with organised learning phases and more formal forms of learning, to coach and to moderate, to provide feedback and to advise the learners competently. To do that they need counselling, training and suitable tools themselves.

The goal is not just to share, store and make available existing knowledge but also to analyse problems and thereby generate new practical knowledge. Cooperation, participation and networking among the various players and practice teams have acquired the status of the predominant type of knowledge generation. This serves to produce more transparency and thus enable one to act with confidence. Vocational education and training practice functions as a co-producer of knowledge. The development of a common knowledge and action base is supported by the merging of different forms of knowledge. Common-sense theories are made explicit and related to scientific theories. Self-evaluation, knowledge development and continuing qualification are explicitly interconnected.

The mobilisation and integration of the relevant decision-making bodies (business management, works councils and executives, competent authorities) turns out to be an indispensable precondition for the further development of in-company vocational education and training systems and an anchor for educational innovations on a wide scale.

Reflection about and evaluation of the diverse insights and experiences from the participating pilot projects and pilot project priority fields as well as the related concept and theory formation also create the necessary preconditions for a transfer, including conclusions, to questions of future programme design and programme evaluation. The BIBB research project on "Reflexive meta-evaluation of pilot programmes involving in-company learning" undertakes an inventory of development and research work in the

promotion priorities cited. The goal is a qualitative development of programme theory and practice as well as a conceptual and methodological development of programme and project evaluation in order to heighten insight acquisition and quality development at all levels.

## **Distance learning today – Developments, approaches, trends**

On the basis of a recent survey (April/May 2007) of 438 distance learning institutes on trends in distance learning, the possibilities of network-assisted learning were outlined. What is meant by network-assisted learning is courses that are offered in part or completely via the Internet. Aspects of quality assurance and quality development were also discussed.

The following trend is emerging with regard to network-assisted learning:

- In view of the growing number of distance learners in Germany (especially in the 25-30 age group) the traditional print media are increasingly being supplemented or replaced by electronic media (blended learning). This serves above all the teaching of subject-matter, teletutoring, communication between learner and teacher and even the holding of examinations or recognition of performance in online seminars.
- In many ways, network-assisted courses offer didactic value added as compared to “traditional” learning opportunities.
- “Web 2.0” technologies are (still) used hesitantly in the distance learning field. When they are, preference is given to wikis and podcasts. These new technologies do away with the strict separation of the roles of teachers and learners.
- The acceptance and hence the dissemination as well as attractiveness and effectiveness of e-learning is determined by the extent to which one manages to build on the realities of work and life, existing (informal) knowledge and the resulting concrete needs of learners and organisations.

The following results have been noted in the field of quality assurance and quality development:

- Greater importance is attached to the admission procedure set forth in the Distance Learning Protective Law (Fernunterrichtsschutzgesetz – FernUSG).
- Many distance learning institutes prefer a certification of providers and offers that goes beyond that.
- Most of the providers of distance learning opportunities use quality assurance tools they have developed themselves.
- The “Guidelines for the Assessment of Distance Learning Courses” developed jointly by the BIBB and the Central Bureau for Distance Instruction (Zentralstelle für Fernunterricht – ZFU) is regarded by many as a further tool for quality assurance and quality development, but it is in need of improvement in some areas.

Four core statements can be made with regard to the future development of distance learning:

- The future challenges lie less in the technology than in adequate didactic preparation of subject-matter.
- Online learning and teaching will spread to those providers that are not so familiar with it now.
- There will be more modularisation in distance learning.
- There will be concentration tendencies in the marketplace; competition is growing, both at the German and at the European level.

## **New learning cultures and new media – Challenges for teaching staff**

The increasingly comprehensive use of IT-assisted information management and knowledge management systems in the company work context is leading to new learning cultures that are characterised by a high degree of individual commitment on the part of the employees. Prompted by the Toyota production system, many German companies, and no longer just large corporations, are in the process of developing their own production systems. In plain language, that means that IT systems and organisational concepts on the one hand and corporate and learning culture on the other are being harmonised. The goals are process optimisation and customer and employee satisfaction. The digital information and

knowledge management systems now available in broadband are being used in everyday in-company training as well as in production and manufacturing independently of place and time, individually and in groups.

What consequences does that have for education personnel? The in-company and inter-company training personnel must be able to shape the individual, daily updated and above all subject-related information and teaching/learning process associated with digital media, since the concrete working environments in production, in manufacturing and maintenance and in all the value added processes that precede and follow them are to an increasing extent digitally equipped. In the face of these changing framework conditions they see themselves confronted with modified and new kinds of work and the concomitant changing demands. The reasons for this are the competition structures that are likewise IT-assisted and going global, company organisation concepts that are changing in all industries and all sizes of companies (change management and process organisation), the consequences of technological development for highly flexible company manufacturing and service processes and the looming shortage of skilled labour (demographic trend).

The new, configurable Training Regulations reflect these trends and offer companies substantial bases for high-quality initial vocational education and training.

They call for the use of modern learning concepts and media. This dynamic trend towards unbroken change in in-company training will persist, and the training personnel's need for training will be increasing. In addition, the performance prerequisites for trainees are changing. Even if on the one hand the "trainability" of the young people is occasionally called into question it must be acknowledged that (high-performing) trainees come to their training with better and better foreign language skills, media skills and social skills as prerequisites. For the so-called "low performers", on the other hand, considerable efforts must be made to prepare them for in-company training, to optimise the transition from school to vocational training (transition management) and generally to motivate them for a company career.



In this context the training staff is more than ever emerging as a strategic variable for the successful implementation of in-company vocational education and training. Their roles are becoming more diversified. The increased self-reliance of the companies offering training in planning, implementing and designing the Training Regulations increases the share and importance of education planning in the work of the in-company training personnel; everyday training in the companies is “individualised”. The quality of initial and continuing in-company education and training thus depends directly on the quality and know-how of the training personnel. With regard to training design, the training personnel, in addition to the role of instructor, assumes the roles of learning counsellor, coach and relationship manager (“knowledge broker”).

A learning culture based on that, making high-quality viable initial and continuing training possible, is characterised by the independence, decision-making competence and above all independent learning competence of the learners. These skills have come to be an essential precondition for ensuring so-called employability, because they enable one to prepare oneself, in time and life-long, for changing occupational demands.

The training personnel, as guarantor of such a learning culture at the level of everyday in-company training, are an extremely heterogeneous group that brings with it differing preconditions for perceiving and shaping everyday in-company training. These are full-time and part-time trainers, skilled workers providing training, and training managers in the field of in-company, inter-company and non-company initial and continuing education and training, management personnel in the vocational education and training system, or officers in the departments of human resources and organisational development (decision makers). The temporary suspension of the AEVO has long been just one facet of the discussion about developing the qualifications of training personnel. There is a need for approaches that will ensure life-long occupation-specific and job-specific further training of education personnel and go beyond initial training. That will require targeted incentive measures with a model character, similar to those that already exist in other fields of action, that do justice to the perceptible change in learning culture.

The programmes on New Media in Vocational Training are exemplary. In this context, specific incentive schemes of the federal government for the development and use of digital media in vocational qualification contribute to the targeted and outcome-oriented testing of sweeping solutions conducive to the pro-active organisation of initial and continuing education and training by the training personnel. Forms of (“digital”) learning venue cooperation, community based and cooperative work contexts extending beyond the limits of the occupational field, and the exchange of information and experience in the immediate everyday training and working environment are all acceptable applications of digital media now. The deployment of mobile terminals and the use of the “social web”, also known as “Web 2.0”, refer to the still-developing potential of IT-based technologies whose effects on vocational education and training are only beginning to become visible.

### **Skills development and the capacity for reflection in change processes**

In recent years, enterprises and education service providers have had to come up with their own organisational development and new action strategies to deal with the consequences of social, political and economic change. For enterprises, this change is seen, for example, in the increasing externalisation and networking of initial and further training activities in cooperation schemes and networks, while education service providers (have to) develop from more supply-oriented continuing training providers profiting greatly from the publicly funded continuing training market into customer-oriented or demand-oriented education service providers. These situations of change and upheaval lead to different work organisation forms, processes and communication pathways for education service providers and companies and can be successfully tackled only with competent and qualified staff. That is, staff have to be supported and trained so that they do not perceive change and innovation processes passively as changes in their environment but can initiate and shape such processes. Thus the central question of the working group was whether and how the staff of enterprises and education service providers are to be trained for these tasks and what skills that requires.

At the same time, situations of change and upheaval are themselves occasions for learning, skills development and reflection and demand rethinking and a new self-image on the part of education personnel and in education management. Processes of innovation and change can and must be the occasion and object for skills development for the players affected in the enterprises and for education service providers, whereby it is of particularly great relevance for learning to actively participate and help to shape it. Thus the second central question of the working group was whether and how the situations of upheaval mentioned could be used for vocational learning, how integration in company learning concepts could take place and how these situations of upheaval can be shaped didactically in the spirit of learning situations.

As the contributions to this working group showed, the education personnel, that is, initial and continuing trainers, education facility management, company pedagogues etc. can easily be accompanied, supported and promoted through suitable instruments developed and tested in the context of pilot projects, for example. The crucial thing is to take up the empirical and process knowledge of the stakeholders and the moderated reflection of experience, for example in the context of a reflection workshop or in coaching processes. The use of these instruments leads to the growth of individual competence and thus supports companies and educational institutions in coping with situations of change and upheaval as well.

Against that background there was a presentation and discussion in the working group of development work on skills development in the context of processes of change, in particular among education personnel and in vocational training institutions, as well as on more theoretical (research) concepts. For example, the reflection workshop tool, developed in the BIBB and tested in enterprises and by education service providers and research institutions, was presented and discussed. That tool makes an integrative process of organisation development and human resources development possible and is therefore especially suitable for use in situations of upheaval, which as a rule are characterised by structural-organisational and human resources dimensions or consequences. Thus the question of organisation development, especially in educa-

tional institutions, was repeatedly at the centre of discussion. The other tools, methods and approaches presented, such as “learning process monitoring and work organisation”, “skills analyses”, “coaching of training personnel”, and “dealing with texts and written reflection” were always presented both from the subject perspective of the learner and from the perspective of organisation development. In all these approaches skills development takes place through or with the help of (supervised) reflection with those involved. It became clear that promising approaches exist in vocational education and training with the corresponding theoretical substantiation and successful testing but that on the one hand they are not yet widely known and on the other they require target group specific modification and adaptation before they can be used for SMEs as well.

The question also arose how the approaches presented, in part developed in pilot projects, could be turned into “marketable products”.

It turned out also that the cooperation of stakeholders across the boundaries of educational fields and industry sectors in the form of networks was an interesting prospect for continuing education and training and organisation development as well. This is also explicitly the case for the qualification of trainers. In this area as well as on the subject of “Organisation of in-company training and/or the training department”, it was stated, against the background of the approaches presented as well, that there was a considerable need for action on the part of companies and educational service providers.

## Outlook

On the basis of the approaches presented on the subject of skills development and reflection in processes of change, prospects and educational policy orientations for development programmes and pilot projects in this thematic field were outlined and discussed. Here too it became clear that pilot projects are a good tool for developing, testing and transferring qualitative and structural innovations in vocational education and training. In particular,

the linkage of didactic and methodical questions of skills and/or human resources and organisation development can only take place in a complex multidimensional context such as is offered by pilot projects. Greater bundling and thematic concentration of pilot projects in the form of development programmes and hence linkage with other educational policy tools as well (action programmes, research projects, PR campaigns etc.) can and should be used by the BIBB to further intensify the effects and the (educational policy) perception and effect of pilot projects.

## **Vocational education and training internationally: Comparison – Cooperation – Marketing**

Coordination:

*Dr. Georg Hanf*

*Hans-Joachim Kissling*

- Qualification frameworks and credit systems: European initiatives – National responses
- In-company continuing education and training in Europe – Continuing Vocational Training Surveys (CVTS)
- Transitions from vocational education and training into employment in Turkey, Vietnam and Japan
- Are we competitive? – Vocational training staff, an international comparison
- iMOVE – Vocational education and training marketing world-wide

## Forum 8

### **Vocational education and training internationally: Comparison – Cooperation – Marketing**

European integration and progressive globalisation mean more competition and more cooperation for German vocational education and training. The challenges and opportunities they entail were the subjects of the presentations and discussions in Forum 8. Various themes came up for discussion: the tasks of German vocational education and training in helping to shape the European vocational training area, the interest of many countries in German counselling for the development of their systems, but also the problems that German vocational education and training encounters in securing a position in a world-wide education marketplace.

At the centre of the European education and training agenda is the promotion of employability and life-long learning. In the Declaration of Copenhagen, the European member states set themselves the goal of increasing the attractiveness of vocational education and training. That includes the comparability of qualifications and the permeability of systems. To that end, a tool for credit transfer (ECVET) has been developed and a European Qualifications Framework (EQF) has been conceived. In the working group “Qualifications frameworks and credit systems: European initiatives – National responses”, participants from 14 European countries discussed responses and reactions to the European initiatives from a comparative perspective and debated the potentials and risks of both tools for the national systems and potential users.

European surveys on in-company continuing vocational education and training in enterprises (CVTS, Continuing Vocational Training Survey) have been carried out for about 15 years. The BIBB participated in different ways in the CVTS1 (1993), CVTS2 (1999) and CVTS3 (2006) surveys. Experts put their international comparative studies on vocational education and training up for discussion.

The CVTS studies were of central importance, but other comparative studies were presented as well.

Interest in the topic “Transition from training to working life” has grown world-wide recently, because this transition is one of the most important steps in everyone’s biography. Another working group used the examples of Turkey, Vietnam and Japan to deal with this topic, which is on the agenda in those countries as well. These countries, with which the BIBB has been cooperating for some time, were chosen because of the different vocational education and training structures and the different economic situation in developing, threshold and industrialised countries. The relationship between the supply and the demand for skilled workers and vocational mobility and flexibility potentials were gone into in a final plenary session and future-oriented strategies from Japan, Turkey and Vietnam were scrutinised for their transfer potentials.

In another working group, the focus was on teachers and trainers as the key stakeholders in vocational education and training and on the question of how occupational/job profiles, qualifications and competences of professional education and training personnel in Germany compare with those in the rest of Europe and the world.

Germany, the world champion in exports, seems to lag far behind the Anglo-Saxon countries in the export of education and training. In a working group chaired by the iMOVE (International Marketing of Vocational Education) initiative on the internationalisation of German initial and continuing education services, the participants therefore pursued the question of why Anglo-Saxon stakeholders were supposedly or actually more successful in international marketplaces.

### **Qualifications frameworks and credit systems: European initiatives – national responses**

The central themes of the working group were two crucial initiatives in current EU vocational education and training policy: the European Qualifications Framework (EQF) and the European Credit System for Vocational Education and Training (ECVET).



Twenty-four specialists from twelve EU member states<sup>35</sup> and Switzerland presented national and sectoral responses to the development and implementation of the two EU initiatives. Whereas Working Group 2.5 discussed the consequences of European initiatives for the development of German Training Regulations, the discussions in this working group were about an international perspective.

EQF and ECVET are tools that only work if compatible approaches to qualifications frameworks and credit systems are introduced at the member-state level. Two questions were at the centre of the discussion:

- How can common goals be attained in the EU and at the same time diverse national vocational education and training strategies and systems as well as the needs of the interest groups be allowed for?
- How reliable is the EQF and ECVET terminology as a medium for fostering mutual trust with regard to the comparability of national qualifications throughout the EU?

### Creating foundations

The validity, credibility and relevance of the proposed EU initiatives depend in large measure on how the terms for the underlying concepts in the vocational qualification systems of the participating countries are understood and used. The chair of the working group began by underscoring the need for concrete measures to develop a common semantics and common terms.

The topic was introduced using a two-year research project with a four-country partnership<sup>36</sup> sponsored by the British Nuffield Foundation. The main concern of the project is “Not just to use the same terms but to speak a common language”.

The project partners are carrying out a cross-border analysis of four occupations<sup>37</sup> and conducting a study and comparative analysis of different vocational education and training models and quali-

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35 Austria, Bulgaria, Denmark, Finland, France, Germany, Greece, Hungary, Italy, Netherlands, Spain, United Kingdom (England and Scotland).

36 Germany, France, Netherlands, United Kingdom (England).

37 Nurses, lorry drivers, software developers and masons.

fication strategies in the EU, taking a “bottom up” approach. They are dealing with the issue of how terms such as qualifications, knowledge, skills, competence and learning outcomes are used and understood. The research findings are helping to develop occupational profiles that are less closely tied to a culture and thus making possible a more objective understanding of every occupation and the underlying qualification and learning processes in the different countries and hence of the similarities and differences in each case as well.

A common understanding of the key terms, which can be defined very differently in the different countries, is needed to place the EQF and ECVET on a solid footing. There are different pathways to an understanding of the concepts underlying qualifications and credit systems. While the Nuffield project relies on education and training research, Finland has carried out a country-wide hearing on the ECVET terms and Italy is undertaking a comparative European inventory of the concepts.

### **Qualifications frameworks**

Five EU partners (Bulgaria, Denmark, Finland, the Netherlands and Austria) and Switzerland, cooperating as partners in a project headed by the BIBB for implementation of the EQF (*Trans-EQ-Frame*), presented their national approaches in connection with the EQF, which were concerned with the political framework conditions and targets of the development of national qualifications frameworks (Austria/Germany/Denmark/Finland) and the role of the EQF as a transparency and translation tool (Germany/Bulgaria/Switzerland). Perceptions and approaches with regard to the first topic differed from country to country. Austria presented a plan for the development of its national qualifications framework that is planned to be implemented by 2010. Denmark is working on a proposal for a transcendental framework that takes the existing qualifications framework for university and vocational education into account and is expected to be ready by mid-2008.

In Finland vocational education and training is modularised and qualifications are described in terms of knowledge, skills and competences, while university-level studies have been measured in credits since the seventies. For that reason Finland welcomes the

EQF, but sees no or very little additional value in a national qualifications framework. Nonetheless the national structure of qualifications will be presented as compatible with the EQF. Germany has shown itself to be open to the advantages that a national qualifications framework can offer with respect to the creation of cross-sector transitions and upgrading opportunities as well as the fostering of supra-regional mobility. This is still an early consultation stage in which the feasibility is tested and principles and concepts are defined; the framework should be completely implemented by 2012. The EQF influences these developments decisively: as a driving force, model, catalyst and future translation instrument. The clear message coming into view is that while mutual trust is indispensable, comparability must also be underpinned by transparency with regard to the substance of a qualification (i.e. quality), which presupposes trustworthy quality assurance and assessment mechanisms.

### Credit systems

Representatives from eight countries<sup>38</sup> presented current developments in ECVET at the level of systems, subsystems, sectors and institutions. It turns out that almost all vocational education and training systems offer a good basis for the ECVET, even if they are anchored in different regulation and administration systems. Finland, France and Scotland are countries that have had modularised vocational education and training systems for a long time, based on learning outcomes and credit-friendly qualification systems (though individually defined). The different development plans for the introduction of the ECVET include the testing of its compatibility with the existing legal provisions for vocational education and training (Hungary/Spain/Greece), pilot projects in the context of national initiatives (Germany/Finland) and the integration of the ECVET into initiatives for international mobility in vocational education and training (France/Italy/Greece).

The papers read confirmed a trend towards development of national credit systems in vocational education and training (only Finland and Scotland were able to talk about their own already existing credit systems; France has a vocational education and train-

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38 Germany, Spain, Finland, France, Greece, Hungary, Italy, United Kingdom (Scotland).

ing system based on creditable learning units). Two core statements can be made on this basis:

- The goal of credit systems is to promote access and advancement as well as cross-sectoral permeability and, as a secondary aspect, geographic mobility in vocational training as well.
- Learning in a credit system is seen as attractive and motivating for the learner. This view has been emphatically supported by specialists in the practice of continuing and initial vocational training.<sup>39</sup>

### Findings of the working group

Competence-based learning, the integration of practical experience at the workplace into vocational training and qualification systems based on learning outcomes are meeting with ever greater approval throughout the EU. Quality assurance measures and intensified use of assessment procedures support the new learning concepts. The educational establishments turn out to be more flexible and open-minded and the qualification systems adapt more readily to the changing learning models and different learning needs and styles. As a result there is a suitable climate for the development of generalised qualifications frameworks that can simplify learning pathways. Against that backdrop, credit systems can play an important role in ensuring recognition and evaluation of all significant learning outcomes.

Despite comparable developments in the direction of new learning and qualification patterns, there are substantial differences from country to country with regard to the administration, organisation and control of vocational education and training and moreover with regard to their conceptualisation, appreciation and funding as well. These differences comprise substantial obstacles to the development of parameters for comparison between occupational profiles and the underlying learning outcomes and qualifications that are applicable in every country.

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39 Private continuing education provider with headquarters in Hamburg Harbour, national vocational education and training association for the automobile industry (France).

The uniform adoption of the learning outcome oriented approach with reliable quality assurance and assessment measures could improve comparability.

The modernisation of the vocational qualification systems in the EU has had a patchwork character up to now, as is inevitable in view of the diversity of vocational education and training models in the Union. We are coming to recognise that similar approaches are being pursued in certain clusters of countries, with regard to the following aspects among others: Restructuring of vocational education and training systems on a common EU model (new member states); systems with relatively few possibilities of transition between the different sectors of the education system and/or pronounced regional differences (e.g. Germany/Spain/United Kingdom); strong vocational education and training systems with significant participation on the part of the labour market stakeholders (Austria/Denmark/Germany/Switzerland) and relatively highly centralised and/or highly integrated education and training systems (e.g. France/Finland/Netherlands). Inter-state cooperation in developing and implementing the EQF/ECVET on the basis of similar systems cooperating within clusters could be a sensible preliminary stage in an all-European approach.

The member states have let the experience acquired through developing their own national qualifications systems, frameworks and credit systems flow into the conception of their EQF and ECVET instruments. The development of national/regional/sectoral qualifications frameworks in the member states profits from this in turn, so that the credibility and the propagation of the EU instruments is assured. Since the national/regional/sectoral qualifications frameworks develop along with the EU models they most probably have more elements in common with the models in other member states, and this in turn will increase the benefits and relevance of the EU models. The principles, concepts and references on which the models are based contribute to the development of a “common language” for peer learning, and the cross-border scrutiny of the related terminology/semantics promotes transparency.

In addition to the institutional interest groups, the possible implications of EQF and ECVET for learners and potential users are

gradually coming into focus. The EQF could contribute to a convergence in so far as one could in future present and define one's own qualifications in reference levels; ECVET could foster new approaches for learning pathways that include the recognition and validation of all relevant learning outcomes. Special target groups such as school students with learning difficulties or with migratory backgrounds and participants in continuing vocational education and training schemes could expect new certificates of achievement from ECVET for their working life and their training pathway.

The member states will want trustworthy expertise to help them with the “fine-tuning” of the national qualifications systems/frameworks and credit systems with EQF and ECVET. At the present time, the EQF can be described as a politically accepted instrument, but the development of the national qualifications frameworks and the implementation of the ECVET appear to be more long-term projects. More detailed talks are needed here with all interest groups. A whole series of questions need to be asked that cannot be answered within the framework of the Congress.

### Key issues for further discussion

- Is there a uniform understanding of the learning outcome-oriented approach?
- Have we already found the concepts and terms that are most suitable as the basis for the EQF? (For example, should qualifications be described in terms of the categories “knowledge, skills and competence” or in terms of the categories “technical, social and personal competences”?)
- By means of what measures can we ensure that the terminology used to describe the EQF is meaningful and used consistently?
- How can the different reference levels of the NQF be related to the eight-level EQF? How can national qualifications be assigned to the EQF reference levels, and what should be done with special features? (Would it be possible, for example, for qualified cabinet makers from different countries to be assigned to different EQF reference levels?)
- Why is there not more extensive information and intensive public discussion about the EQF, considering that it will lead to a fundamental change in our systems?

- What additional competences must our teachers and trainers have in order to work according to this approach?
- Does it make sense to already adapt new learning opportunities (e.g. in the private sector) to the EQF?
- Is the time ripe for ECVET? Shouldn't the discussion concentrate first on national credit systems?
- In what way can credits be standardised and points assigned in the context of the ECVET if the member states define learning units differently, measure credits differently (with regard to size and weighting, for example) and observe different criteria when assigning points?
- Are the investments connected with ECVET justified by the geographic mobility of the learner in vocational education and training that can actually be achieved?
- What political processes can support the implementation of the EQF/ECVET?
- Is a quality assurance agency at the EU level required to lend EQF and ECVET more weight? Would the member states welcome such an initiative?
- Do the separate discussions on ECVET, ECTS, European higher education qualifications framework and EQF (including vocational education and training) serve to promote coherent development or do they just sow confusion and undermine trust?

## **In-company continuing education and training in Europe – Continuing Vocational Training Surveys (CVTS)**

### **Background**

European surveys on in-company continuing vocational education and training in enterprises (hereinafter referred to as CVTS for Continuing Vocational Training Survey) have been carried out for about 15 years. The BIBB was directly involved in preparing the questionnaire for CVTS1 (1993) and CVTS2 (1999).

National supplementary surveys were carried out in both 1993 and 1999 in cooperation with the Federal Statistical Office. Measured by the central indicators of company investment in human capital (proportion of companies providing continuing education and training, rate of participation of employees, continuing training in-

tensity, cost of continuing education and training to the company) we find financial differences between the individual countries that cannot yet be adequately explained. The differences to be seen inside the countries between different industries and enterprises of different sizes have not been sufficiently analysed either. CVTS3 was carried out in 2006.

In the working group, experts from Germany and abroad presented their internationally comparative studies on continuing vocational education and training. The CVTS studies were of central importance, but other European comparative studies were presented and discussed as well.

### Central issues and targets

The following central issues were discussed in the working group:

- How can the differences between European countries in continuing vocational education and training participation, activity, intensity and costs be explained?
- Why are some companies more active in continuing education and training and others more passive?
- What conclusions can be drawn from the international comparisons for practice, policy-making and research?
- Where is more research needed?

The goal of the working group was to conduct a comparative analysis of in-company vocational education and training in Europe, find out the explanations for the differences between the countries and discuss possible conclusions.

### Results

It was unanimously stressed in the discussion that there is a great need for research on in-company continuing education and training. The CVTS2 data in particular have not yet been sufficiently used for national and comparative analyses.

That applies in particular to the microdata, which have rarely been analysed so far in Germany and other countries. The European VTS3 data, which were to be published by Eurostat in October 2007, are being eagerly awaited. They will present the most up-to-date and comprehensive source of statistical data about in-com-



pany vocational education and training in Europe. There was also a suggestion that quantitative analyses be coupled with qualitative research approaches (e.g. in-company case studies) so that differences between countries can be better understood and explained. The term used for this was “transnational interlacing of perspectives”. Company panels too could better portray developments in individual companies or groups of companies and the coupling of company surveys with individual surveys could bring out interesting contrasts.

In connection with in-company continuing education and training, special emphasis was placed on the time factor. Learning here is caught in the crossfire between work and leisure. Learning time can be perceived differently by companies than by individuals/employees. New on-the-job forms of learning are hard to categorise. Some tend to classify them as work, others as learning. That makes these forms of learning hard to pin-point empirically and even harder to quantify. Since the development of these forms of learning was classified as important, the research activities had to be continued and/or expanded here as well

At a more general level, it was stressed that the number of innovations, the employment rate and the level of education of the working population had a positive influence on general participation in continuing education and training. A segmented system of general school education seems to have a negative influence. It was stressed here, however, that one did not have a convincing model to explain participation in continuing education and training in the sense of lifelong learning. Another factor is that it is not yet possible to estimate what depends on what here.

The role of in-company agreements and agreements at the industry level concerning continuing education and training was discussed at length.

Some of the experts detected a positive effect on in-company continuing vocational education and training activities and called for more agreements, while other experts tended to be sceptical. Public co-financing was suggested, with the reservation that the question of what kind of co-financing had to be employed and how in order

to be effective and efficient still needed clarification. A universally accessible continuing education and training landscape like that in the Scandinavian countries was generally recommended, however.

## **Transitions from vocational education and training into employment in Turkey, Vietnam and Japan**

On the topic of the transitions from training to employment the speakers from Japan, Korea and Turkey first gave an overview of their national vocational education and training systems. They explained their organisation and structures, the ways in, the ways out and the permeability of the systems. The transition to employment – the interface between education and working life – is the most important “status passage” in that regard. Vocational education and training structures and institutions do not just differ widely for historical and cultural reasons, they also reflect the peculiarities of labour market demand and economic development in the country concerned.

For young people, entry into working life is a crucial step. The educational level reached up to that point largely determines their future life opportunities – those worst qualified often remain at a disadvantage all their lives. Successful transitions to employment are the confirmation for a national vocational education and training system that fulfils its social task of preparing young people for a vocation corresponding to their capabilities and ambitions and supplying the labour market with appropriately qualified labour.

Countries with a separate formalised vocational education and training system like Germany differ substantially with regard to the structures of transition, the labour market relevance of the skills imparted and the company recruitment strategies from countries in whose education systems vocational training plays a more subordinate role and where directly work-related training is left largely to single-company rudimentary training and continuing training.

Occupation-related and company-related vocational training and employment models were contrasted from the **German** point of view. The German dual system falls into the first category, since

it is based on formal qualifications for recognised occupations. In Germany, when employers are looking for suitable candidates for workplaces they are guided by the information content of leaving certificates, which serve on the one hand as qualification signals and on the other as a means of excluding less qualified applicants. By comparison, the institutional relationships between education and employment in countries with school education and vocational training systems do not permit unequivocal allocation of education certificates to workplaces. Education certificates from the general school and university system assume a different kind of signal function here. They serve as “biographic signals” showing the degree of general learning ability and advancement orientation. The higher the education certificate the more clearly it signalled the willingness of the applicants to exert themselves and the greater their career prospects were.

In **Japan** the vocational education curricula can at best be considered “elementary technical education”. In the schools, importance is attached first of all to employability and the work ethic; technical skills are taught later in the enterprise. Japanese enterprises, when recruiting, appreciate above all the applicant’s success in being admitted to the top schools and not the proof of technical capabilities.

The transition pathways for upper secondary school graduates in Japan are based on a planned economy-oriented approach and are regulated by country-wide selection examinations. The partners integrated into these “flexible gradual integration structures” – state institutions and labour market stakeholders – are not always aware of their partnership. Owing to the current recession, the number of job openings and training places is limited, so that young people who find neither employment nor a training or learning phase are out of luck.

A growing number of them make do with odd jobs. Through various initiatives, the government has been trying to heal the breaches in the transition pathways, but as yet there are no quick solutions in sight.

In **Turkey** one gets the impression that development has not kept up with economic growth. The graduation rates aspired to in pri-

mary school and lower secondary school are still far from being reached, so that the transition to working life occurs very early and one has to ask oneself what future is waiting for these school leavers: poorly paid, unskilled or informal employment relationships, unemployment or waiting loops before training begins? Since the eighties the reputation of vocational education and training has improved somewhat owing to government initiatives, and this has encouraged young people to opt for vocational rather than academic training, reversing the prevailing trend. That is crucial for the skills base of an industrialised nation.

**Vietnam's** economy is still dominated by agriculture, but the growth rates in the industrial and service sectors are high. The active population is relatively young, according to employment statistics, but inadequately trained. Almost one in eight has not completed primary school, and only about one in four is classified as "skilled". In addition to the general school system, vocational education and training is offered by state-run Higher Vocational Colleges, vocational colleges and vocational training centres. Vocational counselling centres assist in the transition to employment. Further strategies are being developed for the future to meet the labour market demand for a more highly qualified labour force, foster economic growth and advance the renewal of existing technology. These approaches involve vocational standards, new curricula, institutional capacity building and diversification measures to incorporate a larger number of non-governmental stakeholders.

A central discussion issue on the theme of "Transitions to employment" was the labour market relevance of training. Crucial importance was attached to the integration of the employer into the system. Another question was how the attitude to vocational education in traditional societies could be changed. Despite the differing contexts and systems, vocational education policy must always strike a balance between tradition and necessary innovations, between education and labour market needs and between flexibility and institutional stability.

No general recipes for resolving the problems of transition can be expected from comparative studies of the transition processes in different national contexts, but one can expect deeper insights into

the institutional factors and control mechanisms of the transition and hence a better understanding of the initial set of problems in each specific system context. The working group attempted to make a contribution in this regard.

### **Are we competitive? – Vocational training staff, an international comparison**

The education personnel in Germany is highly trained, competitive and open to reform. A direct comparison of systems is difficult because initial vocational education and training takes place in the school in most European countries.

The promotion and development of teaching and training personnel must be an exact fit in order to ensure their competences. They can compensate for systemic and structural shortcomings only to a limited extent.

The fragmented plural character of the control of the vocational education system in Germany affects the training of vocational school teachers and the training personnel as well. More efficient organisation of the overall system for greater efficiency, transcending individual interests and fields of conflict, and a change from thinking in terms of education costs to thinking in terms of education investments could be substantial contributions to the goal envisaged.

The professionalism of the vocational education personnel contributes substantially to the quality and prestige of vocational education and training. The professionalisation concepts for this group can be typified for international comparison according to three approaches. While some – especially in teacher training – rely on the foundation of academic studies, others aim more at pedagogic-didactic professionalisation, and a third category distinguish themselves by focusing on semi-professional training (skilled workers acquiring supplementary vocational pedagogic knowledge).

In the Hangzhou Declaration (UNIP/UNEVOC), standards were adopted for the establishment of master courses to train vocational

school teachers for the main vocational disciplines. One important purpose of this is to use the potential of the universities for vocational education research and student exchange and thus promote further development.

Innovations in the field of vocational education and training, as in all fields of economic, technological and social innovation, depend on the collaboration of science and research. The current shifting of the training of vocational school teachers in Germany to technical colleges and teacher training colleges does not mean a loss of quality but it does mean a threat from the dismantling of research structures in the field of vocational education research. The introduction of master's courses for vocational school teachers should therefore go hand in hand with the creation of preconditions for research and development in the field of vocational education.

A concept agreed between all federal states is needed here for a network of vocational pedagogy courses and an associated research network for vocational education research with which efficient and competitive scientific structures can be realised for all 13 vocational disciplines and vocational pedagogy.

With an inter-state reform project, the continuing problem of the permanent undersupply of trained teachers for vocational schools, especially in the craft trades, could gradually be solved.

Only a high scientific standard of acquired competence will enable the teaching personnel to constantly re-absorb dynamic vocational contexts and apply them in their lessons in a matter suited to the students.

The fields of activity of the vocational and economic pedagogues are characterised by great heterogeneity of the target groups, targets, institutions and school forms. They train in differentiated courses at different levels in differing vocational areas and general certificates. Vocational schools open up an alternative to training in the dual system that is independent of the business situation and offers SMEs opportunities for innovation transfer below the university level.

Now that the professionalisation of vocational school teachers through the establishment of university-level training in Germany can be considered a success story, it is coming to be seen more and more in the same light for the semi-professional training of the company counterpart.

The demands on in-company vocational training personnel sometimes differ widely from one industry or company size to another, from full-time to hourly deployment for training. Unlike vocational school teachers, “vocational trainer” is not an independent recognised occupation even for full-time trainers. Prospects are offered by such concepts as “vocational pedagogue – IHK”. The basic qualification “training of trainers” also tends to be offered on a smaller scale than the recommended 120 hours, reduced to just a three-day weekend session. This, like the suspension of the AEVO certificate requirement, does not contribute to improving the image of “trainers”. Yet trainers in Germany in particular are dealing with especially heterogeneous course groups/classes, with correspondingly high demands on their competence.

European projects offer the possibility of deducing innovation need and developing innovative concepts of in-company education and training. Examples of changing demands on personnel in in-company initial and continuing education and training and the development of corresponding international standards were given on the basis of the EUCAM project.

EUCAM is a work process oriented, multilingual and modular-structured learning system for training apprentices and employees in the automotive industry directly at their places of work and is meant to heighten cooperation at multilingual worksites. Low-cost, just-in-time staff training is increasingly becoming a competitive factor.

The introduction of learning systems such as EUCAM calls for a new perception of their roles by initial and continuing education staff and leaves little room for traditional trainers, instructors, teachers etc. The focus is not on the instruction but on the learners as responsible and independent stakeholders who have to be methodically counselled and supported in their learning process.

Learning process guides who are in a position to guide, advise and support the learners methodically in the context of work process oriented learning processes and to use the possibilities made available to them through suitable system modules. The demands on training include internationalisation of vocational training, special significance of learning process management, use of modern learning technologies and media, changing role of initial and continuing training personnel and learning process guidance as a methodological self-image in initial and continuing vocational training.

With regard to the specific competence of the school and in-company education and training personnel in the German dual system, the school representatives referred in particular to the social goals of general education that are always pursued simultaneously (linkage of vocational and general education certificates). With the growing demands on the social competence of all those engaged in training, however, speakers warned with reference to the company personnel against too much pedagogisation and too much convergence of the profiles. Specific for them is the “fostering” of learning in work commissions, the enabling of reflected, communicated work experience.

### **iMOVE – Vocational education and training marketing world-wide**

The export of education services is still comparatively poorly developed in Germany. One has the impression that the world champion exporter Germany is lagging far behind the Anglo-Saxon countries in the export of education.

On the basis of an iMOVE study of the success factors of Anglo-Saxon education providers in exporting education services, this working group shed light on the question of why Anglo-Saxon stakeholders supposedly or actually operate more successfully in international marketplaces. The factors that make British and Australian providers in particular more successful were presented. The key finding of the study is that the reputation of Anglo-Saxon countries as market leaders in education export is based above all on the performance of their universities and colleges.



In the export of non-academic initial and continuing education and training, private small and medium-sized education enterprises in the Anglo-Saxon countries often face challenges and problems similar to those in Germany. The results of the study are therefore based on the identification of trendsetters and the analysis of best practice.

It is a striking fact that Anglo-Saxon education products and services are not necessarily better as far as their content is concerned. On the other hand, a stronger tradition of business and commerce, culture and mentality, political support and marketing strategies are decisive for the success of Anglo-Saxon education exporters. The discussion was on the main findings of the study, summarised in fifteen theses. These refer to the competitive advantages for Anglo-Saxon education providers arising from general social conditions that can be traced to government support structures – especially in the case of Great Britain and Australia – and to entrepreneurial strategies.

It is precisely the planned interlocking of the emphasis on national peculiarities and the performance at three levels, society, state and businesses, that makes a success story of Anglo-Saxon exports and/or Anglo-Saxon marketing.

At the social level, an empire and commonwealth tradition determine the international orientation and export activities. The world is seen as a market. Pragmatism and a willingness to take risks dominate entrepreneurial thinking and action. As a world language, English is a competitive advantage. Thus Anglo-Saxon education exporters define English-speaking target groups worldwide. A traditional commercial view of education also facilitates the export of education. Education marketing is seen as a matter of course. A high level of marketing competence is the key factor in the success of Anglo-Saxon education exporting. A pronounced service mentality also contributes substantially to export success.

At the government level, Anglo-Saxon countries realised long ago that exporting education was an enormous economic factor, so the education sector is a component of foreign trade promotion. The export of education is a national concern and the national strate-

gies developed further the international “activities” of the education businesses. Thus the integral national strategies extend to boundary-crossing cooperation between agencies and organisations as well. Priority markets are defined by the state. These strategies go hand in hand with pragmatic legal framework conditions. Australia in particular has distinguished itself with its export-promoting visa and sojourn regulations. In addition, Australia has developed comprehensive mechanisms and structures to formulate a nationally binding definition of the quality of education measures and to control it. Moreover, a permeable modular education system facilitates education export and permits flexible and customer-oriented adaptation of offers to internationally recognised certificates.

The state support structures abroad are a crucial success factor. Great Britain and Australia invest in world-wide support structures, and the USA does as well. These include investments in comprehensive information and marketing structures, human resources at embassies and consulates and international cooperation schemes and networks.

It is particularly noticeable that when they market their own education system, the country and culture are always important marketing elements. A positive attitude towards one’s own country, a positive national self-image and an attractive image of the country are important preconditions for successful marketing.

At the enterprise level, it should be noted that Anglo-Saxon stakeholders make full use of synergies between education export and the export of industrial goods. One example is the US IT industry. Strategic alliances between education enterprises and the industry as well as tying education exports to product exports and vice versa stand out as recipes for success. Anglo-Saxon education providers are also prepared to invest massively in the services of private marketing agencies and in sales cooperation with other education companies. Electronic media are also used successfully in opening up international markets, not only as marketing instruments but increasingly as learning products and forms as well.

One decisive factor for success is the use of world-wide alumni systems and customer networks. Large investments are made in

regular customer care and hence in sales and winning new customers through personal contacts.

The findings of the study that were discussed at the BIBB congress provide useful suggestions and practical tips, and not just for German education providers who operate internationally or want to internationalise. They are also directed towards decision-makers in politics and business who have underestimated the significance of education as an economic factor in the past as well as those who have already recognised it. They offer suggestions for support structures that could place Germany in the front ranks in education exports as well.

## Outlook

The issues dealt with in the forum on “Vocational education and training internationally: Comparison – Cooperation – Marketing” were by their nature too varied to generate substantive interconnections, much less common results – apart from the synopsis of the third working group. Dealing with different countries promotes better understanding of the systems, their problems and approaches to solutions so that people can learn from one another.

On the topic of European initiatives for qualifications frameworks, it remains to be noted that for Germany, EQF and ECVET give strong impulses for national reforms with the goals of access to the acquisition of qualifications, permeability and equivalence. The strongest impulse is for the focusing and integration of policies that would otherwise be pursued independently of one another if not in opposition to one another. Some countries have already reached goals or created structures aspired to with EQF/ECVET without using the terms, and that can certainly be a stimulus for the German approach. The examples of advanced countries show one thing above all: All stakeholders must be involved from the beginning and find a common language, even if that takes time.

EQF/ECVET, qualifications framework and credit systems have to be embedded at the national level in a comprehensive policy approach, going all the way to legal provisions, with regard to social

integration, life-long learning and mobility, including the relevant counselling as well as quality assurance and quality development. That is the only way to keep them from developing into abstract bureaucratic machinery that thwarts these goals.

More research on CVTS and work with micro-data will be needed in future. It would also be good to interlace qualitative and quantitative methods (“transnational perspective interlacing”). The explanatory power of the models for in-company continuing education and training participation can clearly be optimised as well.

The transition problems present themselves as similar in all countries. The transitions are dependent on the country-specific contexts of educational systems and labour market in each case, however. There is therefore no general recipe; instead the approaches to a solution have to be framed differently from country to country. Dealing with the different countries serves to make the transition control mechanisms in each country’s own system context better understood.

The professionalism of the teachers at vocational schools in Germany can be rated as high in comparison with other countries. But safeguarding the training level at the university level and the innovations that will be necessary in the future demands a fully coordinated (not fragmented) control of the different kinds of stakeholders. It is a question of the common safeguarding of basic courses of study for all pertinent vocational disciplines and their attachment to the context of university research. That is also the only way that the future integration into their international community that is on the horizon can be realised. The in-company trainers come out rather well in Germany in comparison to other countries, but a division in fewer highly qualified trainers in large enterprises and more and more – owing to the suspension of the AEVO – rather low-skilled part-time trainers is starting to emerge. The trainers therefore have to be supported in their role change into learning guides in work-oriented and system-supported learning processes through pinpointed qualification offers.

On the basis of an iMOVE study on factors in the success of Anglo-Saxon education providers, the factors were discussed that make

British and Australian providers successful in exporting education services. The result: Anglo-Saxon products and services are not better. On the other hand, a stronger business and commerce tradition, culture and mentality, political support and marketing strategies are decisive for their success.

### **Suggestions for using the documentation CD**

The present book (Results and outlook for the future) and the CD-ROMs (Documentation) supplement one another. In the print version, the coordinators of the forums sum up the essential results and perspectives of the congress. Reference is made to the speakers and to further reading.

The CD-ROMs contain almost complete documentation of the Symposium papers, forums and working groups. The content of the papers is the responsibility of the authors themselves. Many papers have been revised by them for the purposes of this documentation. The CD-ROMs also include the speeches made at the opening and closing ceremonies, including the presentation of the Hermann Schmidt Prize. They contain more than 500 contributions and video recordings with an overall length of about 150 minutes. You can access the content of CD 1 using the search system. All contributions are arranged by forum and working group theme and can be located by means of a structured menu system. A number of keywords are assigned to the contributions as well. You can either search by keyword or search the contributions for any terms or combinations or terms you choose. Of course you can also search for the name of the author. Any combination of search methods is possible. If the result is too broad it can be narrowed down. A complete list of the keywords used gives an overview of the thematic range of all contributions and the terms used.

All other contributions can be downloaded, printed and copied, provided the source is given. The contributions are protected by copyright.

### **Technical details concerning use of the CD-ROMs**

The CD-ROMs have what is called an "AutoRun function" and will in most cases start as soon as they are inserted into the drive. This function may be deactivated on your system. If so, please start the easy-to-use viewer by double-clicking on the "BIBB 2008" icon.

You will find further user assistance included on the CD-ROMs.

### **Abstract**

What direction are initial and continuing vocational education and training taking in Germany?

This question was discussed by the some 2,000 participants attending the 5th Congress of the Federal Institute of Vocational Education and Training in Düsseldorf, Germany, in September 2007. This compilation and corresponding CD-ROMs present the results of the forums, working groups and presentations, in some cases with sound and images. A critical assessment, reports on models currently being tested and a look at the latest research findings provided impetus for research, day-to-day VET practice and VET policy work.

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