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V O C A T I O N A L  
T R A I N I N G I N  
R E S E A R C H  
A N D P R A C T I C E

## Promoting Innovations in Vocational Education and Training - An Exchange of German Experiences

Federal Institute for  
Vocational Education  
and Training

**BiBB**

- Researching
- Advising
- Shaping the future

# Promoting Innovations in Vocational Education and Training - An Exchange of German Experiences Special Edition BWP - Berufsbildung in Wissenschaft und Praxis

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#### Editorial staff

Dr. Ursula Werner (head), Katharina Reiffenhäuser  
phone: +49 (0)228-107-1722/24  
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To contact authors, e-mail bwp@bibb.de



► Dear Readers,

The Federal Institute for Vocational Education and Training (BIBB) is a federal government institution for policy, research and practice in the field of vocational education and training in Germany, a role it has fulfilled for over 30 years. BIBB's research and development work and consultative activities contribute to tackling the challenges of the future in vocational education and training; as well as promoting innovative training practices, they support knowledge transfer and the marketing of new forms of training provision and future-oriented concepts for reform.

Knowledge transfer and the dissemination of results are vital, both as integral elements of BIBB's consultative and research work and as a key instrument for promoting broader dialogue in the field of vocational education and training. But it no longer makes sense to limit this dialogue to the national context alone. Given today's global networks of business partners and competitors, the time has come to cooperate transnationally on vocational education and training. Stimulating international dialogue on education and training creates opportunities to learn from one another and to pass on the benefits of past experience.

Intensifying this exchange of experience is one of the aims of this brochure. The articles it contains are selected not only to provide information on current research and development work at BIBB, but also to give key insights into the ongoing development of structures and

programmes within the German system of vocational education and training. The brochure sets out to encourage people to learn from one another, to pass on their experience, and to strike up international dialogue with a view to communicating national approaches to shared challenges in the field of vocational education and training. This is a compilation of articles which have appeared in BIBB's German-language journal "Berufsbildung in Wissenschaft und Praxis (BWP)" in recent months, and are now published in English to bring them to the attention of a wider international readership. ■

Dr. Gisela Dybowski

Head of Department "Cross-departmental Tasks / Communication / International Education and Training"

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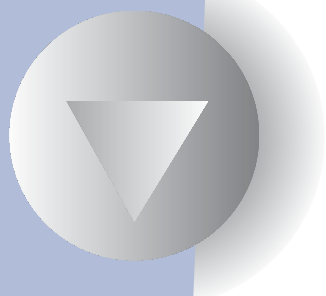
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## BIBB International – Strategy paper on the internationalisation of German vocational education and training



► The process of internationalisation has gathered pace in recent years, spreading through one area of society after another and posing new challenges, not least for vocational education and training (VET). The growing globalisation of the economy and the rapid process of European integration towards a single market for education and employment have given rise to a radically new situation. National VET systems are caught in a cross-current between the imperative of international competition and the necessity for cross-border cooperation. At the same time, there are increasingly stringent requirements for the planning of VET to embrace a European and an international outlook. The paper explains the action to be taken by the Federal Institute for Vocational Education and Training (BIBB) in response to these developments.



**GISELA DYBOWSKI**

Doctor of Politics, Head of Department  
"Cross-departmental Tasks / Communication /  
International Education and Training", BIBB



**GEORG HANF**

Ph.D., head of the "International Monitoring  
and Benchmarking / European VET Policy"  
Section at BIBB



**MATTHIAS WALTER**

Doctor of Law, head of the  
"Advisory Services and International  
Cooperation" Section at BIBB

As countries compete to be more attractive locations for international business, national VET systems become a key competitive factor and scrutiny is turned on their quality and innovative capacity. This prompts a need for action going beyond measures on the national level alone: it is vital to engage in transnational projects, partnerships and international networks as a source of innovative and creative impetus for our own work. "Learning from others", "sharing experience with others" and "working together on solutions" have become essential maxims of VET policy and practice.

According to the Federal Vocational Training Act, BIBB is to take part in international cooperation in the field of vocational education and training in accordance with the guidelines of the competent Federal Minister. In view of the major political importance ascribed to international cooperation in VET, and the growing quantitative and qualitative challenges faced by international VET research and practice, a strategic orientation of BIBB's international activities is required, which will entail the focused development of existing know-how and the safeguard of a high level of professionalism in the development of methods and tools for international VET consulting and marketing. The present paper makes a conceptual contribution towards this end. Based on an analysis of the current requirements applying to BIBB with regard to international cooperation in vocational education and training – reflecting the changed framework conditions – the objectives for BIBB's medium-term activities in the international context are defined and specified in strategic and operative terms.

### The position of BIBB in the international context

In recent years there has been a vast increase in demand for cooperation with BIBB and access to its international competence. More and more institutions and organisa-

tions in Germany and abroad are contacting BIBB, wishing to benefit from its know-how in the field of international VET and to collaborate on research projects, development and advisory programmes. This demand works in Germany's interests – not only from the viewpoint of VET policy but also from economic and employment policy perspectives:

- EU member states are important partners in the construction of a European system of VET.
- With the advancing development of the single European Education Area, cooperation with the European Commission is intensifying. The National Agency "Education for Europe" at BIBB performs an important function under the action programme for lifelong learning within the framework of European VET policy, with responsibility for the Leonardo da Vinci (VET) and Grundtvig (general adult education) sectoral programmes, and for certain special measures such as the EUROPASS.
- European and non-European industrialised countries, which are in transition towards "knowledge societies" and are classified as global competitors, are important and innovative partner countries for VET in Germany.
- By providing advisory services in newly-developed and developing countries which seek cooperation with Germany for the purpose of establishing or modernising their VET systems, BIBB opens up important fields of action and international relationships for the future.

In addition, BIBB is receiving growing numbers of visiting groups, experts and graduates from abroad who are interested in learning more about German VET and the structure, organisation and range of work done by the Federal Institute for Vocational Education and Training.

The upward trend in demand in the international sector reflects the fact that BIBB's remit and role in adapting VET to economic, technical and social developments are a matter of considerable interest to foreign vocational education experts. At the same time, BIBB has continually strengthened its own competence profile in the field of international VET. This has been accomplished particularly through:

- BIBB's longstanding function (since 1989) as a national coordination centre for European Union VET programmes and community initiatives, and the transfer of this portfolio in the year 2000 to a National Agency "Education for Europe" at BIBB;
- the increased participation of various departments of BIBB in European programmes and projects (including those jointly financed by the European Commission via the EU vocational education programme LEONARDO);
- cooperation with partner institutes within and outside Europe;

- advisory work with selected countries on the modernisation of their VET systems;
- international comparative research projects and major studies in collaboration with the OECD, CEDEFOP and the ETF, and
- a series of bilateral VET policy workshops, numerous lecturing activities abroad, academic exchanges and the secondment of short-term experts to developing and newly-developed countries.

## Changes to framework conditions affecting future work

The pressure for modernisation which goes hand in hand with globalisation calls for the rapid deployment of solutions which have already proven successful in practice for the continuous development of the VET system. In recognition of economic relationships based on interaction and cooperation and the new opportunities provided by mobile communications, it is imperative to look beyond our own borders.

Supranational cooperation ventures force the individual member states to address the mutual recognition, or at least the transparency, of vocational qualifications. In the international arena the German dual system must compete with other approaches, and to support this it is necessary to prove the high performance of the German model.

It is an increasing hindrance to the public image and the effectiveness of German activities abroad when partner countries have to deal with a confusing array of German actors, each with different responsibilities. BIBB has therefore set up a marketing task force, the "Aktionsgemeinschaft Profilbildung" in conjunction with GTZ (Deutsche Gesellschaft für Technische Zusammenarbeit – German Technical Cooperation) and InWEnt (Internationale Weiterbildung und Entwicklung – Capacity Building International, Germany). It serves as a discussion forum for key actors from the field of politics, economics and research. Its goal is to define a common identity so as to improve the positioning of Germany's international promotion of VET.

Because of the environment described above in which internationally-oriented VET work is taking place, BIBB's own activities have to be defined in terms of the desired results, and priorities have to be set from which specific objectives can be derived. Such objectives have a number of benefits: they help to prevent duplication of effort and support the networking of activities (synergy effects); they enable us to check the effectiveness of our own work (achievement of objectives); and their normative character ensures planning security.

In the present strategic concept, BIBB has defined the following fields of action for its medium-term activities in the international context:

- BIBB intends to make use of international comparisons, monitoring and benchmarking to identify the most pressing reform requirements, and to come up with appropriate solutions to the problems. At the same time, BIBB will contribute to making the German system internationally compatible by integrating international standards and skills.
- BIBB will support policy-makers in putting forward strategic concepts which reflect German interests at European level, and raising awareness of the impact of Community measures on German VET. In this regard, EU vocational education and training programmes have a substantial role to play.
- The dual approach is acknowledged worldwide as an efficient basic model for vocational education and training. BIBB aims to be proactive in promoting the advantages of the German dual system, without necessarily advocating its crude “export” elsewhere. To this end, BIBB has developed advisory modules which can be used by experts on short-term assignments in relevant partner countries.
- BIBB is involved in a network of relationships with other countries and foreign partner institutions. BIBB intends to intensify this cooperation even further and establish international networks.

## International comparisons, monitoring and benchmarking

Our knowledge about the strengths and weaknesses of our own VET system as well as the strategies and reform approaches adopted by relevant industrialised countries and global competitors forms an important basis for the development of future-oriented reform concepts. By means of benchmarking on the basis of binational or multinational comparisons, the most pressing reform requirements are to be identified, followed by appropriate solutions to the problems.

*Thematic priorities* of particular importance for the future are:

- Ensuring high-quality company-based initial vocational training for young people in the light of the expansion of education and training and corporate assessment of training programmes. Other countries using a dual/alternating model of initial vocational training have integrated this more thoroughly into their education and training system, made VET more attractive and maintained the commitment of companies to in-

itial vocational training. Their experiences may highlight potential alternative routes leading to the acquisition of an initial vocational qualification.

- Greater flexibility of vocational training pathways and reinforcement of links between qualifications through qualifications frameworks. Other countries are favouring concepts which allow greater flexibility and personalisation of initial vocational training within a stabilising framework, in response to new qualification requirements and individualised demand on the part of learners. A question of special interest is the extent to which national qualifications frameworks are able to ensure the cohesion of the education and training system and the transparency of vocational qualifications in the labour market.
- Output-oriented concepts for quality assurance in vocational education and training. In contrast to the strong emphasis on input orientation in Germany, other countries are following an evidence-based approach. Such concepts are backed with quality management systems in order to supply providers with the necessary data to improve the efficiency of their training provision. Comparative studies should give an indication of how far these concepts are transferable to Germany.
- Creating the framework conditions for lifelong learning. Numerous approaches can be found in neighbouring EU countries, from which we could draw inspiration for optimising lifelong learning in Germany. These include financial arrangements, teaching of certain basic skills, learner-centred methods, methods for competency-based recognition/certification of professional experience, and systems of credit transfer for formal and informal learning (accreditation of prior learning, portfolio and bilan des compétences initiatives).
- The need for skilled workers, and recruitment patterns. Action is made all the more urgent by the major shortage of skilled workers which is anticipated for demographic reasons in the coming years, both in Germany and in other countries. Taking account of the need for skilled workers, on the one hand, and the declining numbers of school-leavers on the other, modified recruitment strategies and routes in selected countries are to be analysed (academic drift).



## European vocational education and training policy

The EU has become an important framework for German vocational education and training. The role of the Community is to support and supplement the policies of its member states. Germany's VET policy in relation to the EU faces a double challenge: firstly, to take an active influence in the formulation of Community measures with a view to upholding German interests, and secondly, to assess the impacts of Community measures on German VET. Care must be taken that Community measures do not interfere with key functional principles of German vocational education and training (such as the principle of the recognised occupation – the *Berufsprinzip* – or the dual form of initial vocational training) or usurp the responsibility of the social partners. Ultimately, an active lead must be taken in the Europeanisation and internationalisation of German VET.

Internationalisation will be driven forward by transnational cooperation projects, on a European level in particular. Successful developments and products from Europe will be adapted to national needs, exemplary practices shared, and didactic and methodological innovations (e. g. relating to the use of modern information and communications technologies) will be tested and implemented. European material will be introduced to the curriculum for a wide variety of recognised training occupations, and a number of pan-European occupational profiles will be developed.

### MEASURES

A central task is the scientific monitoring and structuring of the Europeanisation and internationalisation process within vocational education and training. In detail this means:

- Observation and analysis of European VET policy and its effect on VET policy and practice in Germany.
- Expert advisory work and support for national decision-makers (the German federal government, the social partners) on European VET policy.
- Participation in European surveys (e.g. the European Continuing Vocational Training Survey).
- Systematic evaluation in order to record innovative approaches developed in the context of European programmes and to make them usable for German vocational training practice.
- Development of common occupational profiles and/or common training modules which support the aim of delivering cross-border initial vocational training in training alliances with mutual recognition of the outcomes.

- Development of a concept of international vocational competence (foreign language skills, specialist knowledge with an international dimension, intercultural skills and intercultural attitudes).
- Development of framework conditions in the vocational education and training system. In part, this consists of implementing the European Qualifications Framework (EQF) and developing a national qualifications framework which is compatible with the European system so as to increase the “decipherability” of German qualifications in an international context. It also involves implementing the European Credit Transfer System in Vocational Education and Training (ECVET) which supports (cross-border) credit transfer for prior learning. The EQF and the ECVET will help to improve transitions between qualifications and qualifications systems, and hence improve the framework conditions for mobility and exchange.

## Services for the international VET market

In many countries, the organisation of vocational education and training remains firmly school-based and provides rather inadequate preparation for the demands of working life. Business and industry complain that VET is detached from workplace practice and call for the training objectives and curriculum content to be geared more closely towards the needs of the labour market and of companies.

Hence it is necessary to continuously develop and modernise vocational education and training, i.e.

- to create an attractive range of high-quality initial and continuing vocational education and training provision, in order to improve the employability and occupational mobility of those completing courses successfully,
- to make vocational education and training more relevant to practice and oriented to the demands of the employment system, and
- to prepare learners for qualifications which fulfil defined minimum standards and open up employment prospects which meet the needs of the future.

Many countries have recognised this necessity and are seeking experience and support for the modernisation of their VET systems. Here Germany is in international demand as a partner for cooperation and advisory work on vocational education. The vocational education cooperation projects involving BIBB attest to considerable interest from other countries in the German model of dual-cooperative initial vocational training. This applies particularly to the following elements of the German model:

- The low financial burden on the state;
- The high correlation between labour market requirements and training profiles;
- The close association of theoretical, school-based and practical, company-based training;
- The existence of uniform national quality standards (training regulations and examinations) in vocational education and training;
- The high level of work productivity, product quality and efficiency in German industry, which can be traced back, at least in part, to the German dual system;
- The relatively low rate of youth unemployment by international comparison.

## MEASURES

- BIBB is advising political decision-makers at system level and works primarily towards the integration of all relevant players in society. There is an emphasis on strategic cooperation on VET with selected countries, particularly in South-East Asia.
- BIBB is advising selected partner institutions from the new EU member states on the planning, implementation and coordination of structures and processes in vocational research and development, and on the detailed formulation of normative frameworks for the regulation of tasks and responsibilities in vocational education.
- In the framework of the “Aktionsgemeinschaft Profilbildung” (marketing task force), BIBB is working with GTZ and InWent to help to develop a corporate identity for the German actors, as a means of strengthening the German position in the international VET discourse and in international markets, with a view to accomplishing German developmental, economic and education policy objectives.

## International cooperation

Cooperation on a partnership basis and international networks are providing a crucial impetus promoting quality, flexibility, mutual and interdisciplinary learning. The central aspect is that of cooperation with selected countries which have significant relationships with Germany for overarching (education) policy reasons.

BIBB accords great importance to maintaining and developing relationships with its partner institutions. Tight-knit research cooperation programmes with the French partner institute Céreq underscore that Franco-German cooperation is as important in the field of vocational education and training as in any other. Following EU enlargement, BIBB also continues to broaden its programme of scientific exchange and cooperation with national

vocational training institutions and other agencies responsible for VET in the countries of Central and Eastern Europe.

## MEASURES

- BIBB is consolidating its bilateral cooperation with EU institutions (CEDEFOP and ETF).
- The Federal Institute is the national coordinator for the European network of reference and expertise REFER and for the European trainers' network TTnet.
- BIBB and UNESCO cooperate in the global context by exchanging information and materials. Cooperation ventures have been agreed on specific topics, principally in the area of environmental vocational education, the development of standards, and cooperation between the public sector and industry to promote VET.
- In accord with the German Federal Ministry of Education and Research, BIBB participates in OECD activities on themes such as the promotion of lifelong learning, the recognition of informal learning or the transition from initial vocational training into employment.
- By hosting the first “Partners' Meeting” for VET institutions from different European countries, BIBB has initiated a forum and paved the way for regular exchanges which will strengthen international contacts and cooperation opportunities.

The strategy described above for the internationalisation of vocational education and training is a highly significant strand of policy. It has therefore been reflected in BIBB's mission statement, which reads:

### **We cooperate with international partners and offer services worldwide.**

*We advise international partners and institutions on the development and modernisation of vocational education and training. We initiate and maintain international networks and contribute to the structuring of the European education area. With our international competence we promote the effectiveness and competitiveness of the German vocational education and training system.*



## Provincialism or a world-class system? Is German vocational education and training fit for internationalisation?

The advancing internationalisation of business relations calls for an international outlook and international competitiveness in vocational education and training (VET) systems. No doubt all the actors responsible for vocational education and training in Germany will subscribe to this tenet of vocational education policy.

There is also widespread agreement that in VET practice, it primarily equates to the teaching and development of intercultural competence. At system level, the German VET system and the programmes it comprises need to be made more compatible from an international and, above all, a European perspective.

### LEARNING OBJECTIVE: INTERCULTURAL COMPETENCE

There is more to intercultural competence than the mastery of foreign languages. It encompasses the knowledge, attitudes, skills and behaviours which are conducive to appropriate and successful (professional) communication and interaction between members of different cultures. Focused efforts to develop intercultural competences, defined in this comprehensive way, have been a less than conspicuous feature of German VET practice to date. In initial vocational education and training (IVET), stays abroad – the ideal way to acquire intercultural competences – are something of a rarity, particularly in comparison with higher education. Longer phases abroad are the preserve of school-based IVET programmes; as yet, despite the – modest – expansion of funding under the EU Leonardo da Vinci programme, little use is made of them in IVET programmes within the German dual system (i.e. in-company training combined with part-time vocational school). It is too early to predict whether this situation will be altered appreciably by the much improved options, introduced by the German federal government in the new Vocational

Training Act (Berufsbildungsgesetz, BBiG) for integrating phases abroad into company-based IVET (§ 2 (3) BBiG).

Foreign language skills – at least at a receptive level – are now included in a whole range of training regulations for particular occupations. But active promotion of vocational language learning is limited to the few training regulations for which communication in a foreign language is a core element of the vocational qualification (e.g. in foreign trade). Beyond this, vocational foreign language teaching is viewed within the dual system as a matter for the part-time vocational school, yet without necessarily allocating it an adequate time budget to accomplish the task.

In short: there is agreement in principle. It is now widely accepted that in future, for very many people, intercultural competence will be a far more significant aspect of their vocational proficiency and long-term employability than it is today. Yet there is not only a lack of concrete provision in VET practice, but also of coherent concepts for fostering this important competence within VET, e.g. for integrating stays abroad and foreign language courses into company-based IVET.

Naturally, the reluctance of enterprises to absorb the time and cost implications of providing intercultural training for their apprentices is logical and understandable. Nevertheless, this attitude is short-sighted. In order to overcome it, governments at national and EU level should support foreign stays in the IVET sector with the same resolve as in higher education. Industry associations should also be bolder in pointing out that foreign stays and foreign language learning are in the interests of the enterprises themselves, to a degree that far outweighs short-term cost considerations.

### INNOVATIVE COOPERATION BETWEEN LEARNING VENUES

In order to move forward, thought should be given to developing and promoting cooperation models whereby vocational schools with the requisite experience and with partners abroad assist interested companies with the preparation and organisation of training stays abroad. To this end, more creative and collaborative use could be made of the new options under the Vocational Training Act which allow for completion of IVET wholly or partly at full-time vocational school together with extensive phases of company-based work experience (§§ 7 and 43 (2) BBiG). This would be a way of integrating intercultural competence into IVET programmes which appeal both to the industry and to young people. At the same time, it would encourage the building of additional training capacities.

Unfortunately there is no indication that such initiatives might spring up in large numbers. Currently, it is being stressed on all sides that the phenomenon of internationalisation demands a broad-based form of IVET which includes generic as well as specialist and occupation-specific competences. At the same time, however, citing companies' increasingly specific needs, shortages of training places, and school-leavers'

lack of the necessary maturity for an apprenticeship, there is growing reliance on narrowly specialised training pathways. Vocational schools perpetually call for more willingness to cooperate. Meanwhile, any kind of school involvement in IVET programmes covered by the Vocational Training Act is discredited as unfair competition or as a time-consuming and unduly didactic distraction from workplace practice.

#### INTERNATIONAL COMPATIBILITY

The prime concern at system level is to ensure the international compatibility of (vocational) education programmes. Qualifications and competences acquired in the German vocational education and training system should lend themselves to smooth and barrier-free transfer to foreign, especially European, labour markets and to other countries' (vocational) education systems. Of course the converse is also true: a (vocational) education system with an international outlook must be structurally capable of accommodating the transfer of qualifications and competences acquired abroad into the domestic education system. The European Commission is therefore striving for the rapid introduction of a European Qualifications Framework (EQF) and a European Credit System in Vocational Education and Training (ECVET). The EQF and ECVET are intended to support and facilitate the transparency, permeability and competence-orientation of qualifications throughout Europe, with the ultimate aim of mutual recognition and credit transfer. The German federal government, the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder (KMK) and the Board of BIBB have staunchly supported this process. Above all, they view it as an opportunity to redress the undervaluing of in-company vocational training in Europe.

#### COOPERATION INSTEAD OF COMPETITION

The philosophy of the qualifications framework requires the education system to be viewed as a whole. Its various strands (schools, dual system and school-based IVET, vocational and general continuing education, higher education) need to have better linkages at their points of contact, and more relevance to one another in terms of content. However, some of the weaknesses of the German education system lie in this area: there are no systematic interface structures between general education and vocational education; dual system and school-based initial vocational training have developed and are still developing along parallel trajectories almost without coordination; and reliable transitions between vocational education and higher education are still in their early days. Relationships between the different educational sectors in Germany tend to be more competitive than cooperative. The notion of making school-based IVET carried out on the dual principle more easily transferable, e.g. admitting successful vocational school-leavers to chamber examinations, is seen by the protagonists of dual system IVET as an attack on established structures rather than an opportunity to forge better links between the two systems. But even the German Länder,

### *EQF and ECVET – an opportunity for transparency*

which are responsible for school-based IVET, show little inclination to push for more extensive involvement of social partners in these arrangements.

A similar relationship holds between VET and higher edu-

cation institutions. The two-phase degree structure (bachelors' and masters' programmes) and the European dimension introduced by the European credit transfer system (ECTS) are not being used with confidence as an opportunity to build wider bridges between challenging IVET and CVET programmes and tertiary-level study, nor for the recognition of equivalences. Each side perceives the other as a competitor for school-leavers and/or employees with active continuing education needs. They are only willing to cooperate to a limited extent. Qualifications frameworks and credit transfer systems also appear to clash with a system of IVET which imparts a comprehensive range of specialist, methodological, social and personal skills for occupational proficiency in broadly-drawn occupations. They impose an urgent requirement for the competences and qualifications covered by these types of IVET and CVET programmes to be defined and then classified for credit transfer purposes. Moreover, in qualifications frameworks divided into levels, recognised training occupations would be assigned to different competence levels depending on the difficulty of the demands they make, rendering the fiction of equivalent qualifications untenable.

Against this backdrop the German debate vacillates between nervous defensiveness and uncritical adoption of foreign models. What is necessary is a constructive yet critical willingness to allow greater flexibility of pathways, in keeping with the principle of phases and modules. Germany, after all, has a system of recognised, broadly-drawn initial and advanced training occupations to refer to. In international terms, this is a key competitive advantage. This should be adhered to as a reference point for the description of competences which lend themselves more easily to recognition and credit transfer, both nationally and internationally. At the same time, the consensual goal should be to keep the VET system broadly based, even where educational pathways are phased or modular for the sake of better and more flexible linkages between learning venues and educational courses in all phases and on all levels. The success of reform initiatives in this direction may well determine whether Germany retains its "world class" stature as an internationally recognised model for high quality VET provision, or gets left behind and succumbs to "vocational education provincialism". ■



**MANFRED KREMER**

*President of the Federal Institute for  
Vocational Education and Training, Bonn*



## Quality is the best recipe!

At a time when in-company training places are in short supply, it may seem surprising to be putting the issue of quality on the agenda. Some will wonder whether it would not be better to direct all efforts towards creating sufficient apprenticeship places. Yet on closer consideration, quality and quantity of initial vocational training need not be a contradiction in terms. For the better that initial vocational training fulfils defined quality standards, the better its chances of gaining acceptance and the greater the willingness to offer training places. Clearly enterprises see no contradiction in terms, given the current competitive environment in which the quality of their services depends crucially on the skills of their workforce. For this reason, according to a study by the Federal Institute for Vocational Education and Training (BIBB), the majority of German firms believe that quality development will be of increasing significance within their own enterprises.

German policymakers take a similar view. Thus the Bundestag called upon the German federal government to work with the social partners and the German Länder, supported by BIBB, to develop methods for the external evaluation of quality assurance practice in initial and continuing vocational education and training. The aim is to support all those involved in vocational education and training (VET) to develop their quality assurance practice, and to provide them with appropriate and practical instruments for continual quality assurance and quality assurance management. On this basis, BIBB has established a working group on "Quality assurance in initial and continuing vocational education and training". The group has taken stock of all work on quality assurance in VET to date, and published the results in the BIBB German-language series "Wissenschaftliche Diskussionspapiere" ("Research consultation papers", [www.bibb.de/de/5720.htm](http://www.bibb.de/de/5720.htm)). Furthermore the theme of quality represents a main focus of BIBB research programmes for 2006 and 2007.

If quality is to be discussed and assessed, or even measured, target and norm values are needed; we have to define what we mean by (good) quality. This would be easy if we had clear and unequivocal concepts of what quality is and how it can be measured. In reality, though, differing concepts of quality are found both among academic researchers and among vocational practitioners, and no dependable methods and instruments exist for determining quality in a clear-cut and reliable way. In the end, therefore, the only way to work out which particular definition of quality is being used is on the basis of discourse, using processes of social interaction and assisted by negotiation techniques. This is undoubtedly the origin and one of the key explanations of the German "consensus model" in vocational education and training.

Wholly in keeping with this principle, in the amended German Vocational Training Act the legislator assigned responsibility for continual development of the quality of vocational education and training to the Länder committees for vocational education and training and the vocational training committees of the competent bodies. Although these bodies always have been responsible for quality development, this statutory mandate provides the impetus to define this role more precisely and to develop corresponding methods and instruments. The prime concern is to improve cooperation between the partners in the German dual system at local level on the "learning regions" model.

Produced in consensus between the social partners, the initial and further training regulations are an important quality management instrument. A great deal has been done over the years to speed up the reform process and to develop new recognised occupations. Between 2000 and 2006 alone, new regulations were passed for 146 occupations, and 42 new recognised occupations were developed. Today these processes can generally be completed within one year in most cases. Nevertheless, there is still room to optimise some aspects of the procedures. Also, the role of research within the regulatory process must be strengthened; for example, by improved networking with research into the early identification of qualification developments. The BIBB Board has set up a working group to deal with all questions relating to regulatory procedures, and to make proposals on quality assurance. This begins at the stage of preparatory research, includes consultation between the social partners and analysis of the roles of the actors involved, and finally addresses the implementation of the regulations in vocational training practice. The aim is to arrive at clear agreements on procedures, which will be reinforced in recommendations from the Board.

For a long time, input quality was at the forefront of the quality debate. Discussions were instigated most notably

## Constantly developing quality assurance

by the German Education Council's 1969 study on improving the initial vocational training of apprentices ("Zur Verbesserung der Lehrlingsausbildung", Deutscher Bildungsrat 1969).

Then, as now, thorough and systematic initial vocational training programmes, the ratio of instructors to apprentices, the occupational and teaching qualifications of training staff, and the suitability of training resources and workshops were deemed to be relevant quality indicators. Having been incorporated into laws and regulations, they have now become standards for in-company training. This has contributed to lasting improvement of the quality of initial vocational training.

Input criteria determine which enterprises are entitled to provide training, but by the same token, other enterprises are effectively excluded from doing so. Ultimately only about one firm in two fulfils the prerequisites to provide a full initial vocational training programme. The input criteria are therefore subject to growing criticism. At times they are characterised as mere formalities to be checked off; indeed, almost as bureaucratic barriers to training. Logically this culminates in the demand for the removal of regulations constraining initial vocational training. The prime focus of criticism was the Ordinance on Trainer Aptitude (Ausbildereignungsverordnung, AEVO). In August 2003, this was suspended for a five-year period. So far this appears not to have had a lasting effect on the willingness of enterprises to provide training. The Federal Ministry of Education and Research (BMBF) has commissioned BIBB to evaluate the suspension of the AEVO. The central question will be the extent to which suspending the ordinance has succeeded in generating additional training places, and what consequences the suspension has had on the quality of training. Findings are expected to be available in the summer of 2007.

From the outset, process quality has always been an important consideration alongside input quality. Thus pilot schemes have repeatedly provided the impetus for testing new initial vocational training arrangements and transferring them into practice. Process quality is also a central tenet of ISO standards and other certification procedures. The underlying philosophy is not merely to measure quality, but also to develop quality in the framework of a learning, constantly self-reviewing and changing organisation. This immediately shifts the perspective from the system level to the level of corporate processes. Clear evidence of this shift is seen in the way that initial vocational training is now being integrated into business processes rather than organised separately from the work process. Certification procedures have contributed to more systematic planning

of initial vocational training in companies and closer alignment of training with the needs of internal customers.

Hence greater attention has been paid over the past few years to output and outcome quality. Not that quality criteria are any more likely to be justified on the basis of vocational pedagogy; the prime consideration is the concrete benefit to the training enterprise. For companies and in-company training staff, the ultimate clinching factor is the satisfaction of internal customers with their services and the "pay-off" of training for the company. This is legitimate and, in the end, just reflects the expectation that initial vocational training will transfer occupational proficiency and prepare learners to carry out tasks competently at skilled-worker level.

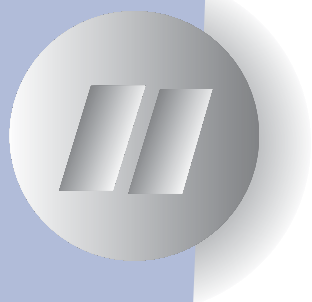
At the same time, a fundamental field of conflict becomes apparent: on the one hand, initial vocational training is expected to train people for occupations, a term which implies broad occupational fields of work. On the other hand, it is in the interests of enterprises to prepare skilled workers to be the best possible fit for company-specific positions. From this point of view, a programme of initial vocational training is of high quality if it fulfils company-specific requirements. The repercussions of this approach tend to involve demands for greater differentiation of the regulations, preferably dispensing with time stipulations, reducing obligatory content, significantly cutting back on training resources, and giving the enterprises greater involvement in final examinations. Taken together, the above changes would lead to the "business annexation" and destandardisation of training.

However understandable these demands may be in the interests of the acceptance of initial vocational training within companies, there is a hint of estrangement from, if not outright rejection of, the principle of the recognised occupation (Berufsprinzip). The challenge in future will be to grant more latitude for differentiation and corporate flexibility without compromising this principle. To this end, however, it is also necessary to call a halt to requests for specialised occupations limited to narrow occupational fields and with minimal opportunities for development. ■



**REINHOLD WEISS**

Deputy President and Head of Research at the  
Federal Institute for Vocational Education and  
Training, Bonn



## Permeability: Much remains to be done

If regular learning is to become an integral element of the whole lifespan, it must be possible for people in every phase of life to take the next step from their existing qualifications and competences, and pursue the educational pathways they have embarked upon in one direction or another. There must be no dead ends. This is why, for many years, the demand for greater permeability has been a matter of fundamental consensus in education policy. It is a relevant issue for all sectors of education. The most vital aspect for vocational education, and its perceived status, is the extent of integration not only with the general educational sector but also with institutions of higher education.

Although some progress has been achieved, a whole series of barriers remain to be overcome in the endeavour for greater permeability. Traditionally, training courses in Germany have been kept fairly discrete from one another, because access is often made dependent upon particular formal qualifications. Yet the organisational principle of making competence acquisition contingent upon curriculum content to be mastered, courses to be completed or certificates to be obtained, cannot claim universal validity. Nor can this monopolisation of access routes and entrance entitlements be legitimised indefinitely on the grounds of quality assurance.

(1) To begin with, permeability *within vocational education* must be ensured. This applies equally to the relationship between initial and continuing vocational education and training, and between different occupations requiring formal training. In the long run, two-year training occupations can only become established if credit transfer and transition into three-year initial training programmes are viable possibilities. Thought must be given to this aspect from the outset whenever training regulations are updated.

(2) *Additional qualifications* can make an important contribution to better permeability. If their regulation and certification is brought within the scope of the regulation revision procedure, they not only enhance the flexibility of initial vocational training but also open up individualised development options at the same time.

For example, they make it possible to prepare for recognised advanced vocational qualifications whilst still undergoing initial vocational training, or to gain a general educational certificate in addition to a recognised vocational qualification.

(3) Attendance of *full-time vocational schools* should be viewed much more positively as an opportunity to train for an occupation.

Through recognition and transfer of the skills acquired in this context, unnecessary repetition can be avoided, learning periods streamlined, and resources ultimately deployed more efficiently. The amended Vocational Training Act (Berufsbildungsgesetz, BBiG) has therefore rightly created the possibility for successful completers of full-time vocational school or extra-company training courses to be admitted to chamber examinations. If these opportunities are to be utilised, all parties must be willing to take up the new legal options constructively and in the interests of young people. For instance, the chambers should put aside their reservations about full-time school-based initial vocational training. By the same token, the vocational schools must make overtures to industry, and organise their teaching so that both the content and the level of cooperation with enterprises support access to chamber examinations.

(4) The framework of *dual courses of study* provides for credit transfer and the integration of initial and continuing vocational education and training with tertiary-level studies. This is reflected by the growing number of dual study courses at colleges of advanced vocational studies (Berufsakademien) and (private) universities of applied sciences (Fachhochschulen). Throughout Germany, there are now almost 550 degree courses of this kind, with some 42,500 students.

The introduction of bachelor's degree courses has brought new opportunities to combine vocational courses with subsequent programmes of study. Yet the considerable levels of curricular and organisational integration that can be achieved within cooperation initiatives have so far proved impossible to reproduce on a broad scale. What is missing is a system of equivalence by which competences from vocational education and on-the-job experience could be translated into credit towards study programmes.

(5) The *development of a credit transfer system* is therefore a central challenge facing the continuing development of vocational education. Preliminary experience is currently being gathered in the context of pilot projects. Criteria, in-

struments and processes are being developed and tested, with which competences from vocational education or occupational practice could be converted into credit towards study. The experience gained is likely to point up how occupational competences need to be defined and verifiably documented in order to be compatible with higher education.

Comparative analyses of training, advanced training and degree course regulations suggest that this approach could yield a range of savings, from exemptions for individual certificates of academic achievement to reductions in course length amounting to several semesters in some circumstances.

(6) Great expectations attach to the *development of the European Qualifications Framework (EQF) and a corresponding national qualifications framework (NQF)*.

These are intended to make it possible to match competences – regardless of where and how they are acquired and certified – to particular qualification levels. The Board of the Federal Institute for Vocational Education and Training (BIBB) welcomed the development of a European Qualifications Framework in principle. There should be no bias against vocational training processes in initial vocational training, continuing vocational training and occupational practice or in favour of school-based or academic courses. Instead, the goal of vocational education policy must be for every level of qualification to be equally attainable via vocational pathways, and for attainment at every level to be equally demonstrable by practical means. Initial vocational training based on the principle of the recognised occupation (the Berufsprinzip) lays an appropriate foundation for this.

(7) For vocational education, the *outcome-orientation* of the EQF is, in essence, nothing new. The emphasis on occupational competences (Handlungskompetenzen, “doing” skills) is almost a trademark of vocational education. Training regulations and curricula do not merely specify lists of topics but also, importantly, the knowledge, skills and competences to be achieved. These are increasingly assessed in project-based final examinations which test proficiency in fulfilling the demands of real situations. With regard to a national qualifications framework, these examinations should be made even more competence-focused and linked to a description of the competences acquired and the level of competence achieved, framed in terms of learning outcomes. It would lay a good foundation for this if training regulations were geared expressly towards learning outcomes. The logical consequence might be to render detailed specification of curriculum requirements superfluous, thus delegating more responsibility to those accountable “on the ground” for the exact form of initial vocational training and the allocation of tasks to learning venues. Regulations would therefore need to be supplemented with illustrative implementation guidelines for enterprises and schools.

(8) A proven means for the recognition of informally acquired competences are *external examinations*. In the year 2004, some 29,000 employees made use of this possibility. They accounted for 5.1 percent of all examination candidates.

The reform of the BBiG has eased the conditions for admission to the examination for mature employees wishing to qualify in a recognised occupation (the Externenprüfung). They now only need to have been employed for one-and-a-half times the standard length of initial vocational training. What is still missing, however, is a simple, standardised and transparent procedure for demonstrating evidence of competences acquired in practice.

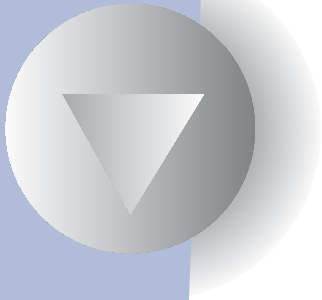
(9) There can no longer be any real doubt that *competences acquired in working life* can equip someone perfectly well to *commence a programme of tertiary-level studies*. So far, the regulation of access for non-standard entrants varies greatly in the different German Länder. Some have very liberal regulations whereas others are more restrictive. In their coalition agreement, the CDU/CSU and SPD parties decided to open up access to higher education for all who successfully complete initial vocational training. This would necessitate a standard national framework regulation to define the criteria and procedures for access to higher education. Different forms of access will have to be distinguished, depending on the certification or competence level attained. In addition to unrestricted access, equivalent to the universal entrance qualification for higher education (allgemeine Hochschulreife), there should also be a qualification entitling the holder to study a more restricted range of subjects at universities or universities of applied sciences. It is the role of higher education institutions to work with experts from vocational practice to develop suitable mechanisms and methods.

(10) Permeability does not result solely from more flexible organisation and management of transitions, or from the recognition of qualifications for access to education courses. The deciding factor is ultimately the *recognition and valency of qualifications in the labour market*. Over and above a national qualifications framework, it is therefore vital for admission requirements to be dealt with more flexibly and openly in collective agreements, employment law and recruitment practice. A situation must not arise where the education policy sector develops instruments for the recognition of informally acquired competences but employers remain hidebound by formal criteria for staff recruitment and human resources development purposes. ■



**REINHOLD WEISS**

Deputy President and Head of Research at the  
Federal Institute for Vocational Education and  
Training, Bonn



## Credit transfer for permeability

► Work has gone on for some time in Germany at national level to promote permeability between educational pathways, but with limited impact. Developments at European level to establish a credit points system across all sectors of education could now support efforts to bring about greater permeability, by enabling credit transfer for prior learning. This article will examine the thrust of this new orientation, the prerequisites that would be necessary for implementation, the current status of developments and the thematic issues that remain to be addressed.



KERSTIN MUCKE  
Dipl.-Ing. Päd., Research associate in the  
"Vocational Learning Pathways and Training  
Careers/Promotion of Target Groups" Section  
at BIBB

The transparency and permeability of educational pathways is an issue which constantly demands attention from national education policymakers. At times the focus is on lifelong learning, at other times on equal opportunities for mobility and progression within and between different educational sectors and systems.

This is no accident but an expression of the continuing separateness and relative insularity of the different strands of educational provision, particularly the vocational-academic divide.

For decades, efforts have been geared towards linking up these forms of provision.

### National efforts

Discussions about permeability between the vocational and higher education sectors have been influenced by a number of different concerns, and by shifting priorities even within those areas. Thus, in the 1960s, it was largely the specific needs of the labour market (e.g. for teachers or engineers) which led to measures to open up access to higher education. In the 1980s and early 1990s, attention was turned to boosting the appeal of vocational education and training. Amid the debate on the equivalence of vocational and general education, the German Länder enacted regulations on access to higher education for those who had professional experience but no academic certificate of entitlement. Then, from the mid-1990s, there was great interest in offering a combined alternative to conventional university studies, i.e. combining initial vocational training or employment with study. This was aimed particularly at upper secondary school leavers looking to enter employment. The new "dual" programmes of study were developed and established at higher education institutions.

Nevertheless, these developments did not contribute in any substantial way to the promotion of transparency and permeability between the different strands of the education

system. Why not? The regulations of Germany's Länder on access to higher education without an academic entrance qualification affirm the underlying assumption that successful completion of initial vocational training, and subsequent work and continuing vocational education and training, is an effective qualification for tertiary-level study. Yet they provide no means of obtaining credit towards a programme of study for relevant competences already acquired in working life. Given that there are differently formulated regulations in each Land as well as regional differences in implementation, all these provide is a general prognosis of the likely academic success of vocational applicants. Even for the majority of dual courses of study, where periods of vocational training (and occasionally the curriculum units covered) are largely recognised as integral components of the study programme, this is no more than the first step in improving transitions, and hence permeability, between vocational and higher education. Apart from the fact that most dual courses of study were developed for upper secondary school leavers looking to enter employment and hence unaffected by the transition issue, even here there is little or no recognition of prior learning in the form of exemption from repeating duplicate elements, nor mutual recognition and credit transfer for completed examination components. In other words, so far credit transfer for prior competence has not been – at least at national level – a universal concern.

## Reorientation with European momentum

In response to the lack of options for awarding credit for vocational competences, and the resulting lack of transparency and permeability between the vocational and academic strands of the system, a possible solution might be the emphasis on learning outcomes, i.e. what someone can do, what competences they possess, on successful completion of a particular course. If accompanied by the development and establishment of a mechanism for validating such competences by means of a credit point system, it would be possible to award quantifiable credit for prior learning, which could be transferred to subsequent courses, wherever they are undertaken.

### IN HIGHER EDUCATION – ECTS

These considerations were prompted not only by European resolutions but also by national recommendations, which led to an intensive debate about developing and introducing this kind of system in both the academic and the vocational sector. Development of the **European Credit Transfer and Accumulation System (ECTS)** for the higher education sector throughout Europe has been in progress since 1989. The 1999 Bologna Declaration proclaimed the introduction of this credit transfer system in all member states

to be a key element in the creation of a European Higher Education Area by 2010. At the same time, a qualifications framework was established which defines the standards for bachelors', masters' and doctoral-level degrees. Particular tribute should be paid to the thought devoted to providing an interface with vocational education in the Bologna Declaration.<sup>1</sup> This laid the foundation stone for the possibility of credit for vocational learning towards tertiary-level courses – and vice-versa, a relevant consideration for degree-course drop-outs hoping for seamless continuation of their training in the vocational sector.

### IN VOCATIONAL EDUCATION – ECVET

Following on from developments in the higher education sector, more recently there has been work on another European credit points model – ECVET (the **E**uropean **C**redit **S**ystem in **V**ocational **E**ducation and **T**raining). The 2002 Copenhagen Declaration paved the way for this development. In this document it was agreed to strengthen cooperation in vocational education and training by

- increasing transparency and supporting information, guidance and counselling,
- promoting the recognition of competences and qualifications by means of a credit transfer system for initial and continuing vocational education and training, and
- ensuring high quality standards in vocational education and training.

The implementation of these aims is only just beginning, and should not proceed in isolation from developments in the higher education sector – particularly as regards the creation of systems for recognition of competences and credit transfer between vocational and academic pathways, or between the world of work and the world of education. Part of the ECVET debate encompassed the development of a mechanism for the validation of occupational competen-

from 1989	Development of the European Credit Transfer and Accumulation System (ECTS) for the higher education sector
1999	<b>Bologna Declaration</b> ECTS is proclaimed a key element in the creation of a European Higher Education Area by 2010; decision to create a qualifications framework for bachelors' and masters' degrees
2002	<b>Copenhagen Declaration</b> on enhanced European cooperation in vocational education and training and development of a European Credit System in Vocational Education and Training (ECVET)
2004	<b>Maastricht Communiqué</b> Creation of a European Qualifications Framework (EQF) for the vocational and higher education sectors with a corresponding system of credit points; call for compatibility between ECVET and ECTS.

Overview 1 Establishment of a European credit transfer system

ces, which is a key difference from the debate in the higher education sector. The central focus is not on the requirements of a formal qualification, but is directed towards the recognition of occupational competences/clusters of competences (learning or work outcomes); what a person should be equipped to do (the target profile) and what the person can do already (the actual profile).

#### AT THE INTERFACE BETWEEN VOCATIONAL AND HIGHER EDUCATION

Finally, the 2004 Maastricht Communiqué recommended continued development as well as linkage between the higher education and vocational education sectors. The ministers emphasised the need to raise the attractiveness of vocational education and training in Europe, to link vocational education and training with labour market needs, and to promote greater permeability with the higher education sector. Two mechanisms in particular are to be developed in this connection. The European Qualifications Framework (EQF) which should be suitable for the validation of vocational and academic competences, and the European Credit System in Vocational Education and Training (ECVET).

The evaluation of competences (learning outcomes) identified would be the second step.<sup>2</sup> An appropriate mechanism for this purpose would contain general evaluation criteria (descriptors) described at different levels (as currently discussed in relation to the EQF and the prospect of a compatible national competence framework). With the aid of defined evaluation modalities which should be relevant to both sectors of education, it would then be possible to award credit points which express the “value” of each individual competence. This in turn would make it possible to award credit transfer for an individual's prior learning or competences (actual profile) towards a subsequent education programme in either the vocational or the academic sector.

In the third step, practicable methods should be established for the documentation and evaluation of competences. Meanwhile, models for credit transfer within and between different strands of education should be developed and established in the education system. These methods could subsequently be made equally usable for the labour market, especially for the selection of suitable staff and for in-company human resources development.

## Prerequisites for credit transfer

To implement these European resolutions, and especially to lay suitable foundations for the mutual recognition and transfer of competences (not qualifications!), one credit

transfer system needs to be established which operates across the boundaries of the different educational sectors (see box).

The first step will be the fundamental task of documenting vocational and academic competences (the target profile). The definition of the term “learning outcome” and the ultimate descriptions of individual competences would need clarification. In vocational education and training, reference can be

made to training and examination regulations. One aspect to be examined is the extent to which the description of learning outcomes requires concretisation with specific examples. Similar questions arise in the higher education sector. Degree and examination regulations are more input-oriented, while the module handbooks produced in connection with the introduction of bachelor's and master's programmes do not indicate with sufficient clarity what a graduate of the particular course should be able to do.

## Status of developments

Currently, work is taking place at national level on the implementation of these objectives in the academic and vocational sectors and at the interface between them. The progress achieved varies greatly.

#### IN HIGHER EDUCATION

Provision was made for the introduction of bachelors' and masters' degrees combined with credit points in German universities and higher education institutions in the amended German Framework Act for Higher Education of 1998. The relevant provision (§15 (3)) made it possible for two or more higher education institutions/universities to reach agreements on mutual recognition and credit transfer for units of study completed by students. Two years later the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder (KMK) decided to proceed with the realisation of the aims of the Bologna Declaration in Germany. In January 2002, the German Science Council (Wissenschaftsrat) recommended that the universities of applied science (Fachhochschulen) should also be included in this development, and in October 2004 the KMK further extended the introduction of credit points to state colleges of advanced vocational studies (Berufsakademien). As a result, the German higher education sector now boasts more than 2,900 bachelors' and masters' degree programmes. In the summer semester of 2005, this represented around 26% of all degree courses at universities, universities of applied science and colleges of art and music.<sup>3</sup> Regrettably for the

#### Necessary steps for the establishment of a European credit transfer system

1. Description of competences (learning outcomes)
2. Development of a standardised and translatable evaluation mechanism
  - Levels and descriptors (EQF/NQF)
  - Evaluation modalities (ECVET/ECTS)
3. Development of practicable methods of use and defined credit transfer rules.

prospect of universal mutual transferability of study credits, however, they make use of a variety of credit transfer systems and assessment principles.<sup>4</sup> One remedy here might be the adoption of the ECTS system which has undergone further refinement at European level. Developed during the 1990s under European education programmes as a quantitative system, it now takes account of qualitative elements such as learning outcomes, levels and student workloads. If the refined ECTS can become more than just a basis for the latest projects at national level in the higher education sector,<sup>5</sup> and can be incorporated into the criteria of accreditation agencies, then thinking in the higher education sector will have moved one step closer to a credit transfer system which operates across academic-vocational boundaries. The same applies to implementation of the national qualifications framework in higher education. The national framework for qualifications, in the sense of formal certificates, has been developed since it was announced in the Bologna Declaration and was passed by the KMK in April 2005. This framework, too, allows for an interface with vocational education and training, but the detailed formulation of this aspect has been left open-ended. This is no surprise, given the current divergence of emphasis between the focus on qualifications in higher education and on competences in the vocational sector.

#### IN INITIAL AND CONTINUING VOCATIONAL EDUCATION AND TRAINING

The most recent developments are taking place in vocational education and training. As yet, no resolution or recommendation to develop a national credit transfer system has been forthcoming from education policy actors. Nevertheless, in March 2005 the German Employers' Organisation for Vocational Training (KWB) put forward an initial proposal for a European Qualifications Framework (EQF) and credit transfer system (ECVET) which has been further refined by Gesamtmetall (metal and electrical industry employers' association), BITKOM (association for IT, telecommunications and new media companies), VDMA (German Engineering Federation) and ZVEI (electrical and electronics manufacturers' association). These proposals were fed into discussions during the consultation on the EQF (which covers all sectors of education) and may also contribute to the subsequent development of a national qualifications framework (NQF)<sup>6</sup> or, preferably, a national competence framework (NCF). The main issues for discussion within this consultation are the fundamental principle of the EQF itself, the proposed general criteria for the evaluation of competences (descriptors – knowledge, skills and competences) and levels, and the question of linkage with the national framework. By the end of 2005, various national responses<sup>7</sup> had been submitted to the European Commission's consultation document.<sup>8</sup> They indicate that the EQF is generally seen as a means of establishing transparency (i.e. "decipherability" of qualifications) and better

#### Literature, resolutions and responses

MUCKE, K.; SCHWIEDRZIK, B. (ed.): Studieren ohne Abitur. Berufserfahrung – ein "Schrittmacher" für Hochschulen und Universitäten [Study without a university entrance qualification. Professional experience – a "pace-setter" for higher education institutions and universities]. Published by BIBB, Bielefeld 1997

MUCKE, K.: Duale Studiengänge an Fachhochschulen. Eine Übersicht [Dual courses of study at universities of applied science. An overview]. Published by BIBB, Bielefeld 2003; [www.wege-ins-studium.de](http://www.wege-ins-studium.de)

Declaration of the European Ministers of Vocational Education and Training, and the European Commission, on enhanced European co-operation in vocational education and training. Copenhagen, 29. and 30.11.2002

Maastricht Communiqué on the Future Priorities of Enhanced European Cooperation in Vocational Education and Training (VET) of 14.12.2004

European Commission: A European qualifications framework underpinned by a set of common reference levels. Brussels, 23 November 2004

Beschluss der KMK vom 10.11.2000 zur Realisierung der Ziele der Bologna-Erklärung in Deutschland – Sachstandsdarstellung [Decision of the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder of 10.11.2000 on realising the goals of the Bologna Declaration in Germany – national report]; [www.kmk.org/doc/publ/bologna.pdf](http://www.kmk.org/doc/publ/bologna.pdf)

The Wissenschaftsrat (German Science Council): Empfehlungen zur Entwicklung der Fachhochschulen [Recommendations on the development of universities of applied science]. Doc. 5102/02. Berlin, 18.1.2002. It was recommended to allow credit transfer and award accreditation for phases of professional experience.

Beschluss der KMK vom 15.10.2004: Eckpunkte für die Weiterentwicklung der Akkreditierung in Deutschland [Decision of the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder of 15.10.2004: Key points for the further development of accreditation in Germany]

Beschluss der KMK vom 21.4.2005: Qualifikationsrahmen für deutsche Hochschulabschlüsse [Decision of the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder of 21.4.2005: Qualifications framework for Germany higher education degrees]

German Employers' Organisation for Vocational Training (KWB): Berufliche Bildung für Europa. Europäischer Qualifikationsrahmen (EQF) und Leistungspunktsystem (ECVET). [Vocational education for Europe. European qualifications framework (EQF) and credit transfer system (ECVET)] Version: March 2005

Germany's first responses to a "European Qualifications Framework (EQF)" by the BMBF and the KMK, 15.11.2005

Response of the top-level organisations of German industry to the consultation document, 15.11.2005

Response of the German Federation of Trade Unions (DGB) to the consultation document "Der Europäische Qualifikationsrahmen – Ein Transparenz-Instrument zur Förderung von Mobilität und Durchlässigkeit" [The European Qualifications Framework – A transparency mechanism to promote mobility and permeability], 6.12.2005

Response of the Board of the Federal Institute for Vocational Education and Training (BIBB) of 14.12.2005 to the consultation document

Declaration of the national top-level organisations of the social partners and the BMBF on the implementation of the credit transfer system in continuing vocational education and training exemplified by the advanced training regulation for IT of 27 March 2002. In: BMJ (ed.): Federal Gazette of 12 June 2002, No. 105a, Vol. 54, Bonn 2002

Recommendation of the BMBF, the KMK and the HRK to the universities and higher education institutions to award credit points for advanced vocational training and allow credit transfer towards a higher education degree, 26.9.2003; [www.hrk.de/beschluesse/3597.htm](http://www.hrk.de/beschluesse/3597.htm); in addition, see BMBF: press release 202/03 "Berufsausbildung soll auf das Hochschulstudium angerechnet werden" [Vocational training to be credited towards higher education degree] of 4.11.2003

permeability between different forms of provision and sectors of education. It is nonetheless feared that, without an adequate phase of development, the (internally inconsistent) EQF in the form currently proposed may not gain sufficient acceptance to stimulate changes in national systems. There are inherent contradictions in the proposed EQF between the (competence-based) learning outcomes approach, which is to be welcomed, the impossibility of verifying where competences were acquired, and the (unsubstantiated) assignment of qualifications to EQF levels (Annex 2). Logically the levels should only serve the purpose of evaluating individual competences/clusters of competences. Any associated statement on how qualifications within a national education system relate to one another remains within the domain of national/sectoral authorities. Only if the EQF refrains from making explicit links with formal qualifications will it become possible to correct what are currently seen as inappropriate “classifications” of vocational qualifications within European systems of equivalence (e.g. the European Recognition Directive), based on evidence.

The elements of the EQF described are integral to the core concept of a credit transfer system in vocational education and training (ECVET), which is now being fleshed out with corresponding evaluation modalities. Efforts should also be made to ensure compatibility with the more extensively developed ECTS in higher education, so that the two systems may reasonably be combined at a later date. Regarding this aspect, a consultation process in the member states is scheduled to run from mid-2006.

#### AT THE INTERFACE BETWEEN EDUCATIONAL SECTORS

As mentioned above, the Bologna Declaration similarly made provision for an interface with vocational education and training. This was taken up at national level by means of various resolutions and recommendations. The goal of allowing credit for vocational learning towards higher education courses, a process to be facilitated by the common implementation of a credit transfer system in continuing vocational education and training following the example of the advanced IT training regulation, was subsequently announced in a declaration by the top-level organisations of the social partners and the Federal Ministry of Education and Research (BMBF) in March 2002. For the implementation of vocational-academic transitions, however, it was necessary to await the recommendation of the BMBF, the KMK and the HRK (Association of Universities and Other Higher Education Institutions in Germany) in September 2003 on the awarding of credit for advanced vocational training towards tertiary study. The challenge now is to make full use of the opportunities to award credit points for advanced vocational training and operate credit transfer towards a higher education degree at a level corresponding to the standards of the given degree course.

Under the European LEONARDO DA VINCI programme, work is in progress on initial approaches to the comparative description of competences and the development of evaluation modalities, particularly in the field of IT, chemistry and the automobile industry. Meanwhile individual companies in tune with European policy (Airbus and Hewlett Packard, to name but two) are using job profile comparisons to establish transparency between different levels of qualification. Coordination of these differing approaches will be another task for the future.

At national level exclusively, the early approaches developed for IT continuing vocational education and training are currently undergoing refinement.<sup>9</sup> Here a mechanism/method for the evaluation of vocational IT competences at “Operative Professional” level is being developed and tested with a view to enabling credit transfer towards higher education.

The criteria, levels and the principles were generally comparable to the concept for the EQF mechanism, presently

Two programmes promote credit for vocational qualifications towards higher education degree courses:

#### 1. Academic course credit for vocational competences

Agency: BMBF

Programme start: September 2005

The programme clarifies questions concerning the description/recording of vocational and academic competences with reference to learning outcomes, the evaluation/measurement of these competences, and methods for making equivalence comparisons between these competences and forms of evaluation. Eleven regional projects are being supported together with a programme of scientific process monitoring (HIS/VDI/VDE-IT) in the IT, health and social care, industrial-technical and commercial sectors. HIS = Higher Education Information System ([www.his.de](http://www.his.de)); VDI/VDE-IT = Verein deutscher Ingenieure e.V./Verband der Elektrotechnik Elektronik Informations-technik e.V. – Innovation+Technik GmbH (VDI/VDE Innovation+Technik GmbH, a company of the Association of German Engineers and the Association for Electrical, Electronic & Information Technologies; [www.vdivde-it.de](http://www.vdivde-it.de)).

#### 2. Further development of dual study programmes in the tertiary sector

Agency: Bund-Länder Commission for Educational Planning and Research Promotion (BLK)

Programme start: April 2005

The programme is developing and testing methods for use throughout higher education to award credit for vocational qualifications and for professional experience, taking account of the international context including quality assurance.

under discussion, which covers all sectors of education. In particular, the BMBF programme on “Academic course credit for vocational competences” (“Anrechnung beruflicher Kompetenzen auf Hochschulstudiengänge”) is an important project geared towards practical implementation.<sup>10</sup>

At the same time, work is in progress on the “Further development of dual study programmes in the tertiary sector” (“Weiterentwicklung dualer Studienangebote im tertiären Bereich”).<sup>11</sup> The results of these programmes could serve as the foundation stone for the establishment of a qualitative credit transfer system across the boundaries between educational sectors. This would not only enable qualitative evaluations of competences acquired by the vocational and the academic route, but also give some positive impetus to the equivalence debate.

The awarding of credit for prior competences towards more advanced (tertiary level) courses could break down barriers and open up new opportunities for completers of vocational programmes to launch or advance their careers.

## Thematic issues

Before a credit transfer system is implemented across all sectors of education, and *mutual recognition* and credit towards higher education for both vocational and academic competences/clusters of competences become a reality, answers must be found to a number of unresolved issues. In particular, these concern appropriate mechanisms for the identification of competences, methods of mutual recognition and credit transfer, examination procedures, the documentation and evaluation of competences, and accreditation of the same (cf. Overview 2).

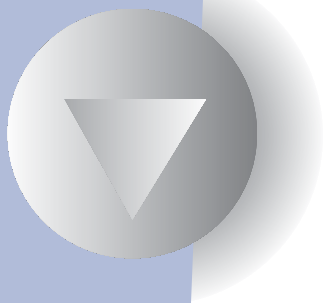
### Overview 2 Thematic issues in the implementation of a credit transfer system

1. Development and testing of appropriate mechanisms and methods for the identification of competences/clusters of competences (learning outcomes) and their qualitative assessment (descriptors/levels; EQF/NQF), and for the calculation of credit points (ECVET/ECTS).
2. Development of equivalence procedures for mutual recognition and credit transfer; clarification of trust issues in relation to cooperation and networking between releasing and receiving institutions/educational sectors.
3. Continuing development of initial and advanced training regulations and examination regulations; orientation towards learning outcomes
4. Modification of examination practice (forms of examination; initial and continuing training of examiners) to ensure outcome-orientation.
5. Documentation of competences/clusters of competences and their evaluation (level and credit points) with the courses (databases) and between them, and for the individual (e.g. implementation and ongoing development of the Europass document).
6. Clarification of questions concerning the accreditation of vocational and academic competences/clusters of competences and the necessary criteria to do so.

This does not claim to be an exhaustive compilation of all the thematic issues. Nevertheless, at the present time, these appear to be the most urgent. If answers and solutions can be found, and if they can be implemented in both the vocational and academic sectors, then the pursued objective of mutual recognition of competences/clusters of competences becomes achievable. Permeability between the vocational and the academic sector, i.e. more flexible dovetailing of and transitions between the two sectors, could then be realised at a quality level never previously achieved. To what extent education policy is capable of supporting this ongoing process remains to be seen. Whatever happens, the statement of intent in the German government's coalition agreement to open up universities to skilled workers could strike a note of optimism and provide crucial support. ■

### Notes

- 1 The higher education institutions were called upon to find ways of recognising prior non-academic learning with credit points and credit transfer.
- 2 Initial findings and exemplar assessments from advanced IT training have been made available. On this, see: Mucke, K.: *Förderung der Durchlässigkeit zwischen beruflicher und hochschulische Bildung. Anerkennung von Qualifikationen und Kompetenzen*. [Promoting permeability between vocational and academic learning. Recognition of qualifications and competences]. BWP 33 (2004) 6, p.11 ff. and footnote 9.
- 3 Cf. BMBF: *Stand der Einführung von Bachelor- und Master-Studiengängen im Bologna-Prozess sowie in ausgewählten Ländern Europas im Vergleich zu Deutschland* [Progress with introduction of bachelors' and masters' degrees under the Bologna Process and in selected European countries in comparison with Germany]. Submitted on 28 February 2005 by the Centre for Research on Higher Education and Work at the University of Kassel
- 4 Schwarz-Hahn, S.; Rehburg, M.: *Bachelor und Master in Deutschland*. Uni Kassel. 2003
- 5 “Kompetenzzentrum Bologna”: *The Association of Universities and Other Higher Education Institutions in Germany* (Hochschulrektorenkonferenz, HRK) is supporting 20 higher education institutions in the implementation of the Bologna reforms, funded by the BMBF. [www.hrk.de](http://www.hrk.de)
- 6 Hanf, G.; Hippach-Schneider, U.: *Wozu dienen nationale Qualifikationsrahmen? – Ein Blick in andere Länder* [What is the purpose of national qualifications frameworks? – A look at other countries]. In: BWP 34 (2005) 1, p. 9 ff.
- 7 Commission of the European Community: *Towards a European Qualifications Framework for Lifelong Learning*. Brussels, 8.7.2005
- 8 Federal Ministry of Education and Research (BMBF) and Standing Conference of the Ministers of Education and Cultural Affairs of the Länder (KMK); *top-level national organisations of German industry; German Federation of Trade Unions (DGB); Board of the Federal Institute for Vocational Education and Training (BIBB)*
- 9 Cf. Mucke, K.; Grunwald, St.: *Hochschulkompatible Leistungspunkte in der beruflichen Bildung. Grundsteinlegung in der IT-Weiterbildung* [Higher-education-compatible credit points in VET. Laying the foundation stone in advanced IT training]. Published by BIBB, Bielefeld 2005
- 10 Cf. BMBF: Press release 215/2005 “Berufliche Kompetenz soll für Hochschulstudium nutzen” [Vocational competence will count towards higher education degree], 9.9.2005
- 11 See footnote 5.



## The European "Training of Trainers Network" TTnet and its German section "TTnet Germany"

► The quality of general and vocational education systems depends to a large degree on the quality of teaching staff. Europe needs a pool of competent, motivated and committed VET staff who are capable of mastering challenges of ever-increasing complexity.

This article presents the European network TT-Net: the "Training of Trainers Network. TTnet is a network set up and moderated by the European Centre for the Development of Vocational Training, Cedefop, and aimed at teaching and training staff in vocational education. Taking the structure and activities of this network as a starting point, the article presents key functions of its European and national-level networks and some perspectives on their work.

### Plurality and European diversity – double the challenge

In 1998 the European Community "Training of Trainers Network" – TTnet – was founded. Contrary to the impression given by its succinct title, TTnet is not concerned solely with problems relating to the training and professional development of trainers. In fact, it specifically targets the full spectrum of teaching and training staff in vocational education, i.e. teachers, tutors, trainers and human resources officers. It has no desire to narrow its focus, the breadth of which is the only way to do justice to European diversity, to the highly divergent configurations of vocational education, and to the work of VET staff.

This orientation towards an all-encompassing target group is ambitious but consciously invests in the idea of a unified "community of practice" formed by all who work together in vocational education. Ultimately, vocational learning is accomplished through the joint efforts of many people in different roles and structures.

The plurality of this concept, together with European diversity, is the double challenge to which the network must rise in all its work.

TTnet envisages itself first and foremost as a pan-European forum in which key actors and decision-makers in the vocational sector can engage in discussion and dialogue on practices, methods, knowledge and expertise focused on key training, skills and professional development issues for all staff involved in vocational education. It operates on two levels: the European Community level, and the national level in each of the countries with a constituent network. Its overall orientation is taken from the policy objectives formulated at Community level and their implications on training practices for VET staff in the member states.



**HEROLD GROSS**

Research associate in the "International Monitoring and Benchmarking/European VET Policy" Section at BIBB and national coordinator of TTnetDE



**PHILIPP GROLLMANN**

Dr. phil., Deputy Director of the department of International VET Research at the Institute Technology and Education, University of Bremen

## The TTnet network at European level

At Community level, TTnet is coordinated by Cedefop.<sup>1</sup> By virtue of the partnerships it has established, today the European Training of Trainers Network pools the resources and skills of over 350 members in 20 national networks.

Cedefop assists the EU Commission in promoting and developing vocational education and training. Its principal tasks include:

- Documenting, processing and analysing data,
- Contributing to the development and coordination of research,
- Evaluating and disseminating useful information,
- Encouraging and supporting coordinated Community approaches to VET issues, and providing forums for a broad and diverse group of stakeholders.

In keeping with the remit of Cedefop, TTnet gears its Community-level activities towards creating added value for the EU. In the last few years, contributing to the implementation of European Union policy for teachers and trainers has become an increasingly important focus for all actors involved in TTnet.

## Contribution of the TTnet networks to the Lisbon and Copenhagen Process

In the year 2000, the European Council which convened in Lisbon set itself the objective of making the EU the most competitive and dynamic economic area in the world. Commensurate with the key function of education in growth, employment and social cohesion, the Barcelona European Council of 2002 called for European education and training systems to become a worldwide quality reference by 2010. It endorsed the “Education and Training 2010” joint work programme which specifies that member states should develop coherent and comprehensive strategies for lifelong learning.

Specifically, the programme provides for measures in the following areas:

- Identifying the skills required by teachers and trainers;
- Establishing the necessary conditions to support teachers and trainers appropriately (including initial vocational training and in-service training structures);
- Addressing the problems surrounding recruitment (attractiveness, flexible pathways into the profession from other careers).

The European Commission set up a working group on “Improving the education of teachers and trainers”. In their interim report on the measures under the programme,<sup>2</sup> the Council and the Commission underlined the urgency of re-

forms and the central importance of the motivation and quality of teachers and trainers. Accordingly, in 2005 the Commission worked with experts nominated by the member states to produce “Common European Principles for Teacher Competences and Qualifications”. These were approved at a Testing Conference held in June 2005.

But since the Maastricht Study, if not before, the view persists that in most countries, the professional development of VET teachers is still a question to which no answer or satisfactory response has been formulated.

In 2006 a special “Focus group for VET teachers and trainers” was established, of which TTnet is a member, to provide more targeted support for staff in the vocational sector.

Earlier studies by TTnet on the role of teachers and trainers in quality assurance were incorporated into the proposals for Commission recommendations on the quality of teacher training. To support national strategies for quality assurance in vocational education, TTnet put forward recommendations for political decision-makers, guidelines for training institutions and a charter for trainers as life-long learners.

In the course of two projects, “PROFF – Professionalisation of VET teachers for the future” and “Identification and validation of non-formal learning for VET teachers and trainers”, recommendations have been developed for VET practice and policy in the EU and its member states.

In the framework of the consultation between TTnet and the EU Commission, in which 13 countries – including Germany – are taking part, the “Defining VET professions” project is currently exploring the possibilities of a competence framework for vocational teacher and trainer professional profiles, linked to an EQF.<sup>3</sup> Among other objectives,

**TTnet**, which now consists of 20 national networks, was set up by Cedefop in 1998 as a European forum for key actors and decision-makers with responsibility for teachers and trainers in the vocational sector.

**TTnet** promotes the sharing, development and dissemination of knowledge on key issues in the training and professional development of vocational teaching and training staff.

**TTnet** does not provide training itself, but aims to stimulate discussion, create synergies and develop innovative strategic concepts.

Through its transnational European forums, projects and studies, TTnet makes an important contribution to the European reference framework for teachers and trainers, and is also involved in the Commission's technical working groups on vocational education and training.

**TTnet** works on three levels: the national, transnational and European Community level. At Community level, TTnet provides logistical and academic support to the national networks, stages workshops and annual conferences, organises projects on specific themes and transversal studies.

At transnational level, groups of TTnet member countries work together on projects addressing themes of special interest to them.

the initiative aims to create transparency and better understanding of the competences and qualifications of trainers and vocational school teachers, as well as a possible joint reference framework for (recognised) qualifications and competences to support the professional development of vocational sector trainers and teachers.

## The national networks

In terms of the conception of TTnet, the national networks are intended to be representative national forums composed of the actors involved in the training and upgrading of vocational teaching and training staff. The members include political decision-makers, associations, the social partners, public authorities, training organisations, enterprises, research institutions and experts, universities and documentation centres.

National coordinators have a dual function. On the one hand, they form the interface with the EU-level of the network and pass on findings which could be relevant to transversal themes. On the other hand, at national level their role is to monitor and promote discussion of developments on priority issues for teachers and trainers in their country, and to identify, evaluate and disseminate innovative methods and solutions.

The principal methods used are workshops, seminars and expert conferences. Additionally, at European level, the work involves organising and instigating thematic projects and transversal studies, and collecting and disseminating examples of good practice. Within the network, the actors

and experts reach agreement on how to tackle key themes in the training of vocational teaching and training staff. They develop problem-solving approaches and strategic concepts.

The network community acts as a source of advisory expertise for cooperation initiatives between different partners on the training of vocational teachers and trainers.

An internal survey of national TTnet networks resulted in the following findings:<sup>4</sup>

Most national networks are balanced in their composition, but greater participation from the private sector would be desirable. The priorities for most national networks revolve around the development of competence standards for

vocational teachers and trainers, efforts to raise qualification levels, recognition of informal learning and quality assurance for teaching staff, support for training staff in SMEs, and the role of trainers in continuing education and lifelong learning.

It is hoped that the presence of policy experts and top-level national organisations in the network will ensure linkages with national strategies. Often, however, higher value is attached to indirect influence via the European level/Cedefop than direct influence through the national network. In general, the national TTnet networks see themselves in a bridging role between IVET and CVET practice and political decision-makers.

Problematic areas for many TTnet networks are their (very) limited resources for network activities, and achieving the desired outreach to the wider community of teachers and trainers. In general the coordinator carries the major part of the load.

## TTnet Germany – TTnetDE

At the end of 2005, Germany became a member with its own network, “TTnetDE – Network for innovation in the training of teachers and trainers in vocational education and training”. The national coordinator is based at the Federal Institute for Vocational Education and Training (BIBB).

The German section of the Training of Trainers network, TTnet Germany (*TTnet Deutschland*, TTnetDE) was officially launched by the Federal Institute for Vocational Education and Training and Cedefop on 3.11.2005 at the Agora Conference on “New challenges for teachers and trainers in VET” in Berlin. This event was also attended by the Federal Ministry of Education and Research and the Federal Ministry of Economics and Technology, the German Employers’ Organisation for Vocational Training (KWB), the German Federation of Trade Unions (DGB), and the national associations of vocational school teachers, Bundesverband der Lehrerinnen und Lehrer an beruflichen Schulen (BLBS) and vocational trainers, Bundesverband Deutscher Berufsausbilder (BDDBA).

Alongside the European themes at Community level, the key national issues to be taken up by TTnet Germany are the problems faced by staff in cooperating between two learning venues under the dual system, and the new training needs arising from innovative training regulations, with a particular focus on process-oriented vocational training and new forms of examinations. An especially important aspect, and this applies to almost every TTnet network in Europe, is the issue of teacher and trainer participation in innovative developments in CVET and lifelong learning in Germany. It has become apparent, however, that European issues tend to dominate the current debate. The reori-

### Notes

- 1 Cedefop: Centre Européen pour le Développement de la Formation Professionnelle (European Centre for the Development of Vocational Training). Cedefop aims to assist political decision-makers and practitioners at the European Commission, in the member states and in social partner organisations throughout Europe to make well-founded decisions on questions of vocational education and training policy. Further information at: [www.cedefop.europa.eu/](http://www.cedefop.europa.eu/)
- 2 Joint Interim Report of the Council and the Commission, Council document 6905/04 of March 2004
- 3 For further details, see: [www.bibb.de/ttnet](http://www.bibb.de/ttnet) (in German)
- 4 8th TTnet Annual Conference, Thessaloniki, 8 and 9 December 2005, Taking stock of TTnet achievements and future developments, Workshop Paper, Anne de Blignières, University Paris Dauphine: Main outcomes of the survey among the TTnet Networks
- 5 Cf. Schlottau, W.: *Ausbildungspersonal – von der Eignung zur Professionalisierung (Training staff – from aptitude to professionalisation)*. In: BWP 34 (2005) 6, pp. 32–35 (in German)

entation towards employment-oriented bachelor's and master's degrees under the Bologna Process and the resulting impacts upon teacher training are giving rise to considerable uncertainty. Discussions about a European Qualifications Framework (EQF) and a German national qualifications framework (NQF) are also taking place intensively in relation to vocational teaching and training staff.

Germany's relatively recent (renewed) membership of the "Training of Trainers network" may partly explain the limited knowledge in Germany of TTnet's European quality references for teaching and training staff, for e-learning and for the recognition of informally acquired competences, and the fact that these have been overlooked or even discussed in adverse terms. By the same token, specifically "German" aspects have not been incorporated into developments at European level.<sup>5</sup> Over and above the official programmes, TTnetDE is increasingly becoming involved in bilateral and multinational cooperation, e.g. with Denmark, France and Belgium.

## Summary and outlook

TTnet can be characterised by highlighting some of its salient features:

### *Among its objectives:*

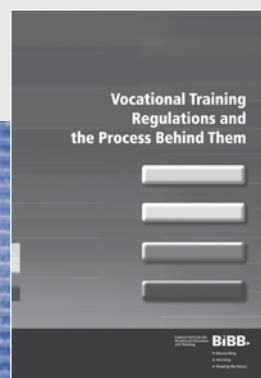
To initiate and promote innovation for the purposes of quality improvement and assurance;  
To Europeanise the national debate and prepare the way for a European policy framework.

### *Among its structures:*

The conception of the network is very ambitious. The networks are meant to extend vertically from political decision-makers and top-level national organisations to committed front-line practitioners, and horizontally to encompass the widest diversity of public and private sector actors. The actual composition is not always satisfactory, and the same can be said regarding the agreement of practical and political-strategic orientations. At national level the network has a very much more pronounced focus on vocational practice. Here, above all, national vocational education initiatives could be brought to fruition even without reference to the Community context. An equally crucial aspect (again, not without its problems) is the network's insistence on an all-inclusive perspective, encompassing teaching and training staff in different types of learning venue and different contexts.

Contexts do differ, governed by the different characterising principles of national vocational education and training systems – be they (public) school-based, dual, or

market led. It depends on the dominant location of vocational training within the education system and the labour market how strongly the aspects of lifelong learning and continuing education and their respective institutions (France, Spain, Italy, Belgium) are represented. Whilst on the one hand the experience drawn from this source must be contextualised, on the other hand there are opportunities for transnational innovation-transfer in respect of Germany's need for greater crossover between initial vocational training and continuing vocational education and training. ■



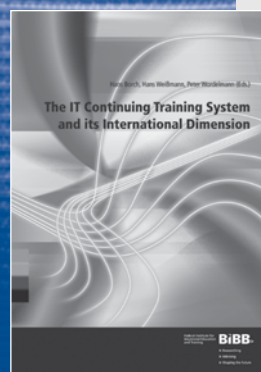
### Vocational Training Regulations and the Process Behind Them

The German government uses laws and regulations to regulate the legal framework for vocational training in the "dual" vocational training system. Legal provisions that outline the aims and content of and examination requirements for in-company training are training regulations.

The Federal Institute for Vocational Education and Training prepares the content of training regulations for the government.

This brochure contains information about the process involved in developing training regulations and offers an overview of materials and aids that BIBB can provide for implementing training regulations in day-to-day practice.

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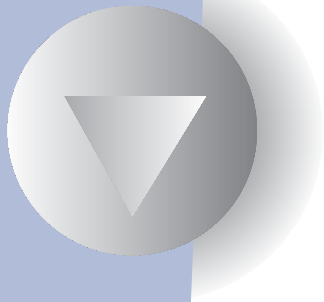
### The IT Continuing Training System and its International Dimension

This volume examines the IT continuing training system and uses comparisons with the French, Danish and Dutch systems. A presentation is provided of the various activities of EU institutions, specialist associations and organisations dealing with IT continuing training at a European level. This results in the identification of pertinent points relating to current vocational policy debate centring on "enhanced competence orientation", "certification of informal learning" and "institutionalisation of lifelong learning". Will the future bring competition between vocational education and training and higher education or will there be a greater level of permeability? What is the value of national qualifications within Europe?

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## Cooperation of BIBB with international partners

► Exchanging experience across national borders is of ever increasing importance, especially in the field of vocational education and training (VET), considering the challenges posed by globalisation. In keeping with its legal remit, the German Federal Institute for Vocational Education and Training (BIBB) cooperates with VET institutions around the world. The current focal areas of BIBB's international work are projects relating to comparative and transfer research, involvement in the processes of European VET policy, and advisory services for the international education market. This article begins by looking at the position of BIBB in the international context, and goes on to report on a partners' meeting convened by BIBB and attended by 16 VET institutions from various countries in Europe. This provided a host of opportunities for exchanging views on current issues in European vocational education and training.



**HANS J. KISSLING**  
M.A., Research associate in the "Advisory Services and International Cooperation" Section at BIBB

### The position of BIBB in the international context

The European single market, increasing international competition and the growing mobility of European citizens require our national education system to adopt a more European and more international outlook. On the one hand, Germany aims to make use of cooperation and exchange with other countries as a means of introducing best practices in vocational education and training (VET); it is also keen to contribute actively with its profile and know-how to the development of practice-based VET, particularly in Europe. This is why, from as early as 2002 in its "Strategy paper for the internationalisation of German vocational education and training",<sup>1</sup> BIBB has stressed the importance of cooperating with partners and building international networks: "Co-operation on a partnership-like basis and international networks are now providing a crucial impetus promoting quality, flexibility, mutual and interdisciplinary learning."<sup>2</sup> The aim is to enhance Germany's international profile as a centre of training expertise and promote the competitive strengths of the German VET system. Accordingly, BIBB has now concluded cooperation agreements with 18 vocational education institutions and supranational organisations. These include not only research institutes from countries with such different vocational education traditions and systems as Australia, Korea and Russia, but also organisations like the vocational education centres of the EU (Cedefop) and the UN (UNESCO/UNEVOC). In addition, BIBB works with numerous other countries worldwide within the framework of German development cooperation rather than under direct agreements. In that context, BIBB is principally a provider of advisory services at system level. The main aim of this advisory work is to improve the given vocational education and training systems in order to create more favourable conditions for the employment of the target groups concerned. BIBB is involved in this kind of work in Ghana, Uzbekistan and Vietnam, for example.

European cooperation in vocational education and training has gained substantial momentum from the declarations of

the European Councils held in Lisbon, Stockholm and Barcelona, and above all from the Copenhagen Process to enhance cooperation in vocational education and training which began in 2002. Hence, cooperation within the European Union (EU) on vocational education policy is another high priority for Germany. BIBB is involved in European developments in a variety of ways: by supporting the Federal Ministry of Education and Research (BMBF) with concept development for the European Qualifications Framework (EQF), for example, or by carrying out a research project concerning the implementation of ECVET (the European Credit System in Vocational Education and Training) in 33 countries.

### “Partners’ Meeting 2006” – a conference report

To cement cooperation within the field of European vocational education but also to bring fresh impetus to long-standing agreements, BIBB initiated a forum for European VET institutions as part of its programme of international conferences. From March 19 to 21, 2006, the BIBB in Bonn hosted its first “Partners’ Meeting” (Partnertreffen). The conference was held with two aims in mind: firstly, to address the topical issue of the EQF, and secondly, to create a forum in which existing relationships could be renewed and new contacts established. Delegates were invited from 14 European vocational education institutions which either have cooperation agreements with BIBB, or with which BIBB currently engages in close cooperation. The participating institutions, most of which were represented by their directors, were from the Czech Republic, Denmark, Estonia, France, Hungary, Italy, Latvia, Lithuania, the Netherlands, Poland, Serbia, Spain, Turkey, and the United Kingdom.

### From EQF to NQF: Experience and perspectives

The European Qualifications Framework (EQF) is a mechanism which should bring greater transparency to educational systems and the competences acquired through education and training. It is also intended to promote permeability between different educational pathways and systems and enable mobility throughout Europe. Germany and other European countries are in the process of addressing the implications for national VET systems, but the most immediate issue is the development of appropriate national qualifications frameworks (NQF). The heterogeneous nature of education systems in Europe means that individual states will respond to the European framework in different ways. It is therefore both important and useful for Germany to engage in the exchange of information at the earliest possible stage in its development of a national qualifications framework.

Four countries with different vocational education and training systems reported to conference delegates on their

### Partners in international cooperation with BIBB (as of June 2006)

Australia	The National Centre for Vocational Education Research (NCVER), Adelaide <a href="http://www.ncver.edu.au/">www.ncver.edu.au/</a>
Belarus	Republican institute for vocational education (RIPO), Minsk <a href="http://ripo.unibel.by/">http://ripo.unibel.by/</a>
Czech Republic	National institute for technical and vocational education (NUOV), Prague (formerly: VUOS) <a href="http://www.nuov.cz/">www.nuov.cz/</a>
European Union	European Centre for the Development of Vocational Training (Cedefop), Thessaloniki European Network of Reference and Expertise (ReferNet) Thessaloniki <a href="http://www.cedefop.gr">www.cedefop.gr</a>
France	Centre d’Etudes et de Recherches sur les Qualifications (CEREQ), Marseille <a href="http://www.cereq.fr/">www.cereq.fr/</a>
Hungary	National institute of vocational education (NIVE/NSZI), Budapest <a href="http://www.nive.hu/">www.nive.hu/</a>
Iran	Technical and Vocational Training Organization (TVTO), Teheran <a href="http://www.iranvtto.com">www.iranvtto.com</a>
Italy	Istituto per lo Sviluppo della Formazione Professionale dei Lavoratori (ISFOL), Rome <a href="http://www.isfol.it/">www.isfol.it/</a>
Korea	Korean Research Institute for Vocational Education (KRIVET), Seoul <a href="http://www.krivet.re.kr/">www.krivet.re.kr/</a>
Latvia	Vocational education centre (PIC), Riga <a href="http://www.izmpic.lv">www.izmpic.lv</a>
Netherlands	Centrum voor Innovatie van Opleidingen (CINOP), 's-Hertogenbosch (formerly: PCBB) <a href="http://www.cinop.nl/">www.cinop.nl/</a>
Russian Federation	Institute for the development of vocational education (IRPO), Moscow <a href="http://www.irpo.ru/">www.irpo.ru/</a>
Slovak Republic	State Institute of VET of the Slovak Republic (SIOV), Bratislava <a href="http://www.siov.sk/">www.siov.sk/</a>
Slovenia	Centre for vocational education and training (CPI), Ljubljana <a href="http://www.cene-stupar.si">www.cene-stupar.si</a>
Thailand	Department of Vocational Education at the Ministry of Education (DOVE), Bangkok <a href="http://www.dsd.go.th">www.dsd.go.th</a>
Turkey	Technical and vocational education research and development centre (METARGEM), Ankara <a href="http://www.iskur.gov.tr/">www.iskur.gov.tr/</a>
UNESCO/UNEVOC	UNEVOC Center, Bonn <a href="http://www.unevoc.unesco.org/">www.unevoc.unesco.org/</a>
USA	American Association of Community Colleges (AACC), Washington <a href="http://www.asacc.org/">www.asacc.org/</a>

experience to date: the United Kingdom, Hungary, Spain and Germany. Spain and the United Kingdom already have national qualifications frameworks whereas Hungary and Germany only started to develop their national frameworks against the backdrop of the EQF consultation process.<sup>3</sup> The United Kingdom, not unusually among Anglo-Saxon countries, has a long tradition of outcome-based qualifications frameworks. However, not only are there significant differences between the qualifications systems in Anglo-Saxon countries, but they are also developing in increasingly divergent directions. The English colleague’s talk dealt primarily with the question of how European policy influences national systems.

In Hungary the EQF is viewed as a challenge to which the national qualifications system is expected to gear up and respond. There is no sense of incompatibility between the national system and the EQF, the full implementation of

which is planned as part of a fundamental modernisation and restructuring of the Hungarian education system.

Spain set up its own national framework for qualifications three years ago. Problems are posed by the assignment of levels, however, in that some of the EQF levels are not described precisely enough or not sufficiently distinct from one another. The Spanish colleague explained that improvements were necessary in this area. This shortcoming was also criticised in Germany's response to the EQF.

In Germany, the Board of BIBB has set up a common platform for the views of the government and industry on the EQF. A roadmap for the development of a national qualifications framework has been drafted, and a steering group appointed. However, there are numerous outstanding issues which must be resolved before Germany can implement a national qualifications framework. The most important prerequisite is the willingness of all actors to work together. Central management and flanking research and development programmes will also be necessary. A possible time-

frame for the development and implementation of a national qualifications framework in Germany might be the period from 2006 to 2010.

In the informal atmosphere of a "cooperation market" on the final day of the conference, the participants had an opportunity to cement existing relationships or indeed to make

firm arrangements for particular cooperation projects. The delegates from new EU member states particularly welcomed this opportunity to make themselves and the work of their institutes known in the broader European setting. The partners' meeting was felt to have been especially useful in bringing together the heads of so many leading European VET institutions in one place to establish contacts and exchange views.

The plan was that this "Partners' Meeting 2006" in Bonn, the first such event, should be the prelude to a regular programme of meetings to provide a means of intensifying and cementing international relationships and opportunities to cooperate. The announcement that another meeting is already scheduled for 2007 in Madrid is therefore especially gratifying.

### Cooperation in practice: Advisory project at the Latvian vocational education centre

One participant at the meeting was Ilze Brante, the head of Latvia's vocational education centre (PIC) in Riga. At the conference, not only was a cooperation agreement signed between the PIC and BIBB, but concrete arrangements were made for ongoing cooperation between the two institutes. BIBB has been in close contact with the PIC since 2004,



Ilze Brante, director of the Latvian vocational education centre (PIC) in Riga, and Manfred Kremer, President of BIBB, after the signing of the cooperation agreement

and has been able to build on the good reputation it has enjoyed in Latvia since the Transform Programme in the 1990s. Established in 1994, the PIC comes under the authority of the Latvian Ministry of Education and Science. Its main tasks are the development of VET and quality assurance in initial and continuing vocational education and training (IVET and CVET) within the state-regulated Latvian education system.

Following Latvia's accession to the EU and stabilisation of the economy, the demands upon workers in the country have also changed. In order to meet the labour market demand for highly skilled workers, to facilitate quality improvement in vocational education and training, and to expand cooperation with social partners, professional associations and allied enterprises, the PIC is leading a national programme supported with EU structural funding for the "Working out of Unified Methodology to Increase Quality of Vocational Education and to Involve and Educate Social Partners". The project is initially set to run from March 1, 2005 to May 31, 2007. After the project coordinators at PIC had agreed upon advisory themes with BIBB in October 2005, experts from BIBB visited Riga at the request of the PIC to advise on the involvement of social partners, on the mapping of occupations with a view to modernisation in particular sectors, and on quality assurance. Moreover they reported on experience to date under Germany's new Vocational Training Act. Further advisory missions are planned. The endeavour to achieve a smooth transition into cooperation on the basis of partnership when the Transform Programmes reached the end of their term has been successful, in the case of BIBB's cooperation with Latvia. In the spirit of BIBB's advisory philosophy,<sup>4</sup> giving due regard to special characteristics of the partner country, tried and tested elements of the German VET system were put forward, which Latvia could use as an aid to developing its own VET system to meet the needs of the future. At the same time, this cooperative approach is a graphic example of the nature and scope of the cooperation agreements that the partners' meeting was intended to inspire. ■

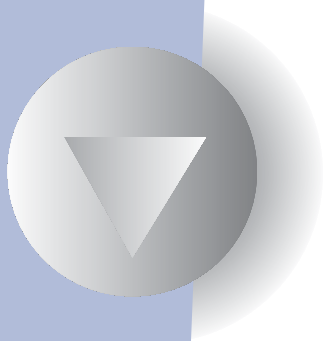
#### Notes

1 *BIBB International: A Strategy paper for the Internationalisation of German Vocational Education and Training. In: BWP spezial no. 7; supplement to BWP 4/2002, p. 45 ff.*

2 *As above.*

3 *A detailed account can be found at [www.bibb.de/en/25552.htm](http://www.bibb.de/en/25552.htm)*

4 *Cf. BIBB International, as above, p. 20*



## Knowledge transfer through consulting – A service provided by BIBB in international vocational education and training

► The growing challenges facing international cooperation in vocational education and training (VET) are what prompted BIBB (Federal Institute for Vocational Education and Training) five years ago to reposition itself in the field of international VET. The foundations for the Institute's medium-term activities in international VET were agreed in 2001 with the Federal Ministry of Education and Research (BMBF) and laid out in a "Strategy paper on the internationalisation of VET".

The emphasis is on:

- international comparative and transfer research,
- support for the European process in VET,
- strengthening European and international cooperation in VET, especially by creating new and building on existing networks,
- consulting and support services in conjunction with the further development of VET systems in transformation, newly developed and developing countries.

These focal areas have greatly shaped the performance profile and the activities of BIBB in international VET in recent years and steadily consolidated its competence profile in this field. A growing number of domestic and foreign institutions/organisations are turning to the Federal Institute in order to draw on its know-how in vocational education and training and to cooperate with BIBB on research, development and consulting projects. Besides stepping up the creation of networks in Europe and cross-border research cooperation with EU Member States, new areas for cooperation on international VET have emerged in recent years in conjunction with consulting activities in transformation, developing and newly developed countries.

Today, many countries face the challenge of developing and reforming their VET training systems in order to meet not only the needs of the economic sector for qualified personnel but also the social needs of the population for employment qualifications of relevance for the labour market. The growing pressure to speed up these processes has led to many countries looking for new forms of collaboration in international VET cooperation and their making more use of the experiences of other countries in their VET reforms. Against this backdrop, Germany and the Federal Institute for Vocational Education and Training are in demand as cooperation and consulting partners for the advancement of international vocational education and training.



**GISELA DYBOWSKI**

Doctor of Politics, Head of Department  
"Cross-departmental Tasks / Communication /  
International Education and Training" at BIBB

The main areas of international VET cooperation in which BIBB has provided consulting services in recent years are:

## System consulting and capacity building

The creation of the framework conditions for steering occupational modernisation processes and their integration into strategic measures for the systematic development of VET are one example of sought-after consulting services. Here, it is important to start with the existing social, cultural, economic and political structures of the respective partner country. After all, each country has been forged by its own traditions and specific environment. The simple importing of models and measures from other countries is not, therefore, realistic. Sustainable reforms can only be achieved through measures that are adapted to the special characteristics of the partner country and are developed together with the political decision-makers on the spot.

It has also been shown that the success of reforms largely depends on the extent to which the institutions and the stakeholders in the partner countries are in a position to carry forward and cement change by means of targeted

capacity-building measures. Thanks to its extensive experience in the setting up and development of organisational structures for vocational education and training, the Federal Institute – mainly in conjunction with a VET project of the Gesellschaft für Tech-

nische Zusammenarbeit (Organisation for Technical Development Cooperation - GTZ) – was able to offer its partners in Serbia on-the-spot support in planning and creating the infrastructure and organisational structure of a Serbian Vocational Education and Training Institute. It also helped to elaborate a normative framework for laying down the Institute's tasks and responsibilities. Furthermore, BIBB was involved in the conceptual work behind the development of a national qualification framework in conjunction with the GTZ "Ethio-German TVET Programme". The next step was then to coordinate this with all the partners involved in vocational education and training in Ethiopia.

### Main focuses of BIBB's international consulting services

- system consulting/capacity building
- early recognition of qualification requirements
- introduction of national occupational standards
- VET and sustained development

## Early recognition of qualifications needs

In many countries a growing need is also emerging for greater orientation of the VET profile towards the needs of the labour market. One ongoing major problem is that the opportunities for companies to assess needs when it comes to developing human resources are limited. Furthermore, many companies are not sufficiently aware of the role which training can play in promoting economic growth and competitiveness. Consequently, it is still difficult to identify the demand for specific skills on the labour market, and the VET system, by extension, is only capable to a limited degree of equipping people with the right know-how.

Moreover, it is also a matter of focussing qualification offerings on those areas that could provide the foundation for economic development in the future. Young people and adults must acquire new and higher level qualifications and skills that reflect the needs of the market. Firstly, this involves creating systematic access to the information necessary for the effective monitoring of the market and working towards a regular exchange of this information between the stakeholders. Secondly, reliable and timely information is needed in order to match vocational qualifications to the future needs of the labour market. Over the last two years, a greater need for consulting services has, therefore, also been intimated to BIBB in the field of early recognition. The Federal Institute has responded to this wish in a first step in Uzbekistan. It has discussed tools for the early recognition of qualification needs within the framework of the initial and continuing training projects of the Institute for International Cooperation of the German Adult Education Association (IIZ/DVV). The goal of the partners is to conceptually adapt instruments and methods of this kind to make them suitable for projects involving regional labour market analyses and the recording of labour market data. The back-up provided for this process is likely to produce more reliable information on how the instruments for the early recognition of qualifications, which have been developed by BIBB in a research network with other institutions, can be tailored to the different situations and specific needs of individual countries.

## Introduction of national occupational standards

With an eye on Europe but also with an eye on the ability of national vocational education and training systems to narrow the gap internationally, more and more countries are seeking to establish uniform VET standards. It is in-

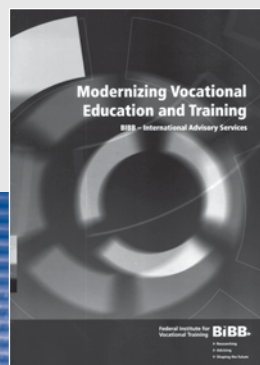
creasingly being recognised that occupational standards are important benchmarks for the quality of vocational education and training and its ability to close the gap internationally. Furthermore, they constitute a necessary reference framework in order to link the demand for occupational competences on the labour market more closely with the offerings of the vocational education and training system. Finally, they are an opportunity to systematise and raise the standard of informal VET offerings and to have competences certified that have been acquired outside formal educational programmes.

However, what is still missing in many countries is a uniform system of occupational standards that could serve as an orientation for training programmes and as a basis for the examination and certification of the competences acquired. The development of a national standardisation, examination and certification system in cooperation with all the relevant stakeholders, particularly in the economic sector, is a further key aspect of the reform process of VET systems that has been launched in several countries where BIBB's consulting services are very much in demand. For instance, the consulting activities that began in Turkey in 1994 in the field of occupational standards, training standards, examinations and certificates have been continued in recent years, too. BIBB is currently supporting a project for the reform of training courses in a joint training centre of the textile industry, which was initiated by the Turkish Textile Employers' Association. Moreover, the Federal Institute supports two of the GTZ vocational training reform projects in Serbia and Ethiopia and provides corresponding short-term expertise for the development of occupational and training standards in these two countries. Finally, initial talks were held in 2003 with the Ministry of Labour of the Islamic Republic of Iran which had contacted BIBB about conceptual and methodological support for the development of occupational, training and examination standards.

## Vocational education and training and sustainable development

As demonstrated by the international conference on "Learning for Work, Citizenship and Sustainability", held in Bonn in October 2004, steps have been taken in recent years to reshape national policy in industrial and developing countries along the lines of environmentally-friendly, sustainable development. In this context, efforts are also being made to permanently anchor education in sustainable development in all areas of the education system. Increasing importance is being attached to the networking of vocational education and training and sustainable development. After all, the environmental

## A selection of publications in English

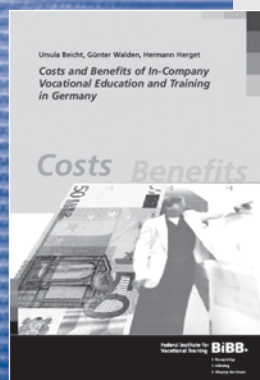


Gisela Dybowski  
**Modernizing Vocational Education and Training**  
BIBB international Advisory Services

Globalisation, increasing international competition, changes in the demographic development and the requirements of the labour market are the main challenges for vocational education and training. This brochure gives an overview of the activities and advisory services offered by BIBB as an international centre of competence in VET.

BIBB 2004, 20 pages, order no.: 09.092, ISBN no.: 3-88555-746-0, Order from Bundesinstitut für Berufsbildung (BIBB), D-53142 Bonn, fax: +49-228-1072967, e-mail: [vertrieb@bibb.de](mailto:vertrieb@bibb.de)

German version: Bestell-Nr.: 09.091, ISBN 3-88555-746-0 beim BIBB



Ursula Beicht, Günter Walden, Hermann Herget  
**Costs and Benefits of In-Company Vocational Education and Training in Germany**

Costs and benefits of in-company vocational education and training have an essential influence on the supply of training places in companies. This publication includes the results of a representative survey in which training companies were asked their opinions about the costs and benefits of training. The results show that cost and benefit values vary widely for different occupations and depending on the basic conditions within the companies.

BIBB 2004, 118 pages, price € 22.90, order no.: 110.448, ISBN no.: 3-7639-1034-4  
Order from W. Bertelsmann Verlag GmbH & Co. KG, P.O. Box 100633, D-33506 Bielefeld  
phone: +49-521-91101-11, fax: +49-521-91101-19, e-mail: [service@wbv.de](mailto:service@wbv.de)

German version:  
Bestell-Nr.: 102.264, ISBN: 3-7639-1018-2



Elisabeth M. Krekel  
**A European Comparison of Controlling in Corporate Continuing Training**

The way in which enterprises in Europe prepare their workforce for future qualification demands and the measures and instruments they already utilise for the achievement of effective training as well as those which they deem necessary for the future is the subject of this publication.

BIBB 2001, 58 pages, price € 13.00, order no.: 110.393, ISBN no.: 3-7639-0947-8  
Order from W. Bertelsmann Verlag GmbH & Co. KG, P.O. Box 100633, D-33506 Bielefeld  
phone: +49-521-91101-11, fax: +49-521-91101-19, e-mail: [service@wbv.de](mailto:service@wbv.de)

German Version:  
Bestell-Nr.: 102.250, ISBN 3-7639-0947-8

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compatibility of products and production processes is emerging as a major location factor. In order to avoid a strategically disadvantageous competitive position in the long-term, ecological aspects are more important than ever when taking economic decisions.

Vocational education and training must, therefore, seek to promote the aptitude for sustainable management and to contribute to environmentally mature action in both the economic sector and the world of work on all levels and in the most diverse areas. However, the networking of VET and sustainable development is unknown territory in many developing, newly developed and transformation countries and, at best, only partially implemented in industrial countries. That is why the demand is growing fast for consulting services and support for development projects and for partner organisations, involved in vocational qualification for sustainable development. Concepts and practical examples that already promote the aptitude for sustainable management in both trainees and skilled personnel are particularly in demand. There is also a lack of training and teaching materials which are practice-oriented and, at the same time, give teachers and trainers an opportunity to familiarise themselves sufficiently with this subject.

The Federal Institute has been active for many years in this area. In connection with pilot projects, it has developed material for training practice as well as concepts and tips on the qualification of training personnel. Not only have they been well received on the international stage, they have also considerably increased the demand for BIBB's consulting services. With its Brazilian partner, SENAI, BIBB carried out the project "Horizons 21". In pilot workshops, trainers from varied occupational areas were schooled in how to raise awareness amongst trainees for in-company environmental protection. Together with them, German teaching and learning materials were adapted to the local needs. Finally, a database with good practice examples was set up. The highly promising results of the project in Brazil attracted the interest of CEA (Centro Educacional de Alta Tecnologia) in Chile. An exploratory trip at the end of 2004 aimed to identify whether parts of the project "Horizons 21" could also be suitable for Chile. In China BIBB was involved in the GTZ project "Initial and further training for vocational school teachers". Together with the members of the Chinese implementation units, the module "Environment and Vocational Education and Training" was developed. It involves the pegging out of the content framework and a methodological/didactic concept. One special challenge here was that the module was also to be suitable for use in e-learning.

As these examples demonstrate, vocational education and training is being taken increasingly seriously in the development strategies of many countries. During this process new challenges are emerging in respect of cooperation in, and the promotion of, international vocational education and training. This, in turn, leads to increasing demand for system consulting, methods and instruments for the standardisation of occupational profiles and certificates, as well as for adapted teaching and learning materials on new focal areas of VET. Experience and know-how can be gained from this international co-operation which can then be channelled in different ways into discussions about national developments in the vocational education and training system too. As a federal institution, the Federal Institute for Vocational Education and Training has been working for more than 30 years for political and economic circles and for VET practitioners. By means of its research and development activities but also its growing consulting activities, BIBB contributes to tackling future tasks and to promoting innovations in vocational education and training both inside and outside Germany. ■

#### Further information on the subject:

##### **Report on Vocational Education and Training (annual)**

Ed.: Federal Ministry of Education and Research, Berlin

Print and online version:

[www.berufsbildungsbericht.info](http://www.berufsbildungsbericht.info)

##### **Geschäftsbericht des BIBB (annual)**

Ed.: Federal Institute for Vocational Education and Training, Bonn

Print and online version:

[www.bibb.de/de/28899.htm](http://www.bibb.de/de/28899.htm)

##### **Jahresbericht der GTZ (annual)**

Ed.: Gesellschaft für Technische Zusammenarbeit, Eschborn

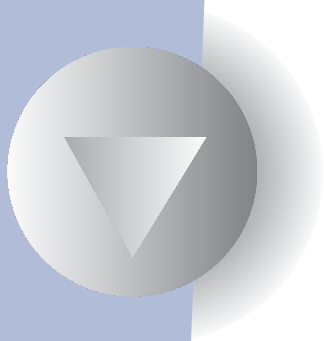
Print and online version:

[www.gtz.de/de/publikationen/3924.htm](http://www.gtz.de/de/publikationen/3924.htm)

Dybowski, Gisela; Gajo, Michael

**Deutsche Berufsbildungskoooperation weltweit – Potenziale erkennen, Synergien nutzen** (with CD-ROM).

Ed.: Federal Institute for Vocational Education and Training, Bonn 2003



## Learning foreign languages in companies that provide in-house vocational training – Exemplary strategies

► The importance of “Europeanising” vocational training – and concomitantly the need to teach foreign languages on an occupation-related basis – has grown significantly in recent years. The work programme that was formulated on the basis of the Lisbon strategy and approved by the EU education ministers and the European Commission back in 2002 cites the promotion of foreign language learning as one of the 13 key objectives that European education policy is to implement by the year 2010.<sup>1</sup>

The European Commission's Language Action Plan that was adopted in the summer of 2003 calls for, *inter alia*, workers to have the “opportunity to improve the language skills relevant to their working life”.<sup>2</sup> This issue is playing an increasingly important role at national level as well. Long gone are the days when only company managers had to be able to operate in contexts involving a foreign language. As economic relations are becoming increasingly internationalised, more and more employees – not only at international corporations but at smaller companies as well – have to be able to understand technical texts and manuals in foreign languages; correspond in a foreign language with parent companies, subsidiaries and associated firms in other countries; and procure important information from Internet pages that are often available only in English.<sup>3</sup>

Activities aimed at further developing skilled occupations are responding to these demands by, *inter alia*, incorporating foreign language skills into the training regulations for the respective occupation. But how are the necessary skills to be learned when the additional time this requires is not available – in either the day-to-day routine at the company providing practical training or in the classroom at vocational school? The following sections outline various strategies that are already being practised with success today.

### Transnational practice firms and learning groups

Many companies have already used the practice firm concept successfully as part of their training activities. Thanks to the responsibility assigned them, trainees acquire important basic skills such as autonomy, organisational ability and negotiating skill. Some firms are already operating on a cross-company basis in this connection and are using the means offered by new media such as e-mail, Internet-



**ULRIKE SCHRÖDER**

Research Associate in the “Education for Europe – National Agency” Section at BIBB

### Useful links

[www.na-bibb.de](http://www.na-bibb.de) (National Agency Education for Europe, at BIBB)

<http://europa.eu.int/comm/education/language/label/index.cfm> (European Label database)

[www.zuef.de](http://www.zuef.de) (Deutscher Übungsfirmenring = German Practice Firm Circle)

[www.wege-ins-ausland.de](http://www.wege-ins-ausland.de) (central website for funding sources for mobility activities)

<http://Leonardo.cec.eu.int/pdb/> (European Compendium & Products Database)

<http://Leonardo.cec.eu.int/psd/> (European Partner Search Database)

[www.Leonardodavinci-projekte.org](http://www.Leonardodavinci-projekte.org) (German-Austrian project and product database)

[www.regiokom.de/nw\\_grenzregion/index.htm](http://www.regiokom.de/nw_grenzregion/index.htm) (Netzwerk Grenzregion – Border Region Network)

[www.Leonardo.th.schule.de/](http://www.Leonardo.th.schule.de/) (BIL-VOC project)

based discussion fora and complex virtual learning environments. This also expands trainees' "web skills" (BORCH/WORDELMANN) more or less as a side-effect. However very few companies pursue such activities on an international level – by, for example, having the practice firm handle orders from foreign business partners or bringing their practice firm together with a similar group in another country. In those cases where this does happen, participants see a marked improvement not only in the skills mentioned above but also in their foreign language skills and intercultural knowledge.

Vocational schools are making increasing use of the potential that cross-(language-)

border collaboration offers. However many companies that provide in-house vocational training are still hesitant to take the leap – despite the fact that it would be possible in some cases to obtain EU funding (as a Comenius language project).

The EU database of projects that have been awarded the European Language Seal offers various examples of learning groups that have been organized on a cross-border basis. In the area of practice firms, the homepage of the Deutscher Übungsfirmenring (German Practice Firm Circle) offers general information on practice firms, assistance and a link to the European network of central administrative offices for practice firms.

### Cross-border mobility

Stays abroad during or after vocational training are the best means for acquiring not only foreign language competency but also a knowledge of the work cultures in other countries. At national level, the draft bill to reform vocational training in Germany that was submitted in the spring of 2004 (*Berufsbildungsreformgesetz* – BerBiRefG) contains provisions that would make it considerably easier to complete training segments abroad in the future.<sup>4</sup> The European Commission is also planning to increase its expenditure on the promotion of mobility substantially, starting in 2007.

The European Commission already provides financial support – through the Leonardo da Vinci programme – for placements abroad or company exchanges lasting up to 12 months (a maximum of six weeks for trainers). Some 30,000 employees in German companies have benefited from these grants in the years since 2000. In this case, participants acquire foreign language competency – usually following a preparatory language course – in a situation in which specific activities in actual working situations are used as a learning platform, a method that noticeably improves learning outcomes. The experience of living and working abroad also helps individuals overcome any inhibitions about functioning in a foreign language. Participating companies can also benefit from mobility activities in a number of ways. The skills that their employees acquire in other countries make it easier to expand their business contacts to international level and the "neutral" view that foreign colleagues have often leads to improvements in one's own internal processes. And finally, involvement in European-level education activities enhances a company's image.

The project databases for the EU's individual education programmes contain a wide variety of examples for activities in the mobility field. They also help firms establish contact with partner companies and inform them about learning materials that are available for different target languages and sectors.

### Cross-border training cooperation

Collaborative transnational training activities constitute an intensification of "classic" mobility measures, so to speak. In this case, firms from several countries agree on set training segments that are to be completed in different countries. The respective national experience with collaborative training can be incorporated here. It must however be remembered that training structures and practice vary from country to country and the German situation cannot always be directly applied to other countries. Compared to conventional measures, this strategy offers the advantage that valuable training time is not "lost" as a result of stays abroad. And thanks to the longer-term and more intensive collaboration, a marked improvement in participants' foreign language skills and intercultural knowledge can be expected – along with the above mentioned benefits for their companies. For companies located near a national border, such activities involve comparatively little cost or effort. Suggestions and examples can be found in, for example, the Netzwerk Grenzregion (Border Region Network) database that was set up as part of the Federal Ministry of Education and Research's RegioKompetenzAusbildung campaign ("regiokom" campaign to build skills in particular regions) which is supervised by the Federal Institute for

Vocational Education and Training (BIBB). In addition, transnational collaborative training is currently a focal area for Germany in connection with the Leonardo mobility programme.

Generally speaking, in all these activities it is advisable to avoid using only the “hub” language English for cross-border contacts. It is impossible to imagine the business sector without English as its *lingua franca*. In this area English fulfils an important function. However, a basic knowledge of a business partner's technical and day-to-day language brings unquestionable benefits. On the one hand, this knowledge increases understanding of an unfamiliar (work) culture. On the other hand, it has a positive impact on building trust between the parties involved.

### Learning that integrates content and language

Not every company can support its employees' acquisition of foreign language competency in this way. Content and language integrated learning (CLIL) offers an alternative in such cases. With this instruction method, part of the subject content is taught in a foreign language (five to ten percent of instruction time). CLIL has already proven its worth in many schools that provide a general education. In the vocational training field, company-related or company-specific texts in a foreign language could be used during classroom instruction at vocational school or reproduced in authentic situations. Correspondingly, what the individual has already learned should be reinforced in the respective foreign language as far as possible during practical in-company training. The advantages of this method: it doesn't require any additional lessons and the foreign language is taught using an activity-based approach with direct links to everyday occupational life. The findings from the BILVOC Leonardo project, for example, could be of assistance when making the necessary arrangements with vocational schools and selecting instruction materials. A wide range of materials for “bilingual instruction” are currently being developed and corresponding continuing training concepts for trainers are being tested under the supervision of the Thuringian Ministry of Education and the Arts. Information on this and other Leonardo projects involving occupation-related language instruction is available in the Leonardo programme databases under the keyword “Language training”.

The growing importance of foreign language competency also poses new challenges for instruction and training personnel. Transnational practice firms must be provided flanking support, virtual learning environments must be moderated and subject instruction must be conducted in a foreign language. Mobility measures are of use only when they are carefully prepared and then followed up on. This



Ulf-Daniel Ehlers, Wolfgang Gerteis, Torsten Holmer, Helmut W. Jung (Ed.)

**E-Learning Services in the Crossfire: Pedagogy, Economy and Technology**

E-learning is undergoing significant changes. Because it is caught in the crossfire of pedagogy, economy and technology, sustainable economic concepts have to be developed. This book discusses approaches that are based on experiences derived from the research project “L<sub>3</sub> – Life-Long Learning”.

The L<sub>3</sub> project was funded by the Federal Ministry of Education and Research and carried out under the responsibility of the Federal Institute for Vocational Education and Training.

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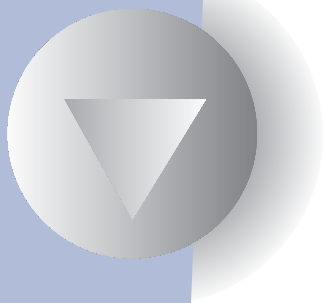
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opens up opportunities for training personnel to expand their own skills. Those responsible for human resources in companies providing in-house training can support this process by, for example, providing corresponding continuing training activities (and granting training personnel leave from regular duties to participate in them).

Even in smaller companies, the internationalisation of business relations is in full swing. Those companies that ensure at an early stage that they have corresponding skills in-house will have an advantage here. Foreign language skills are of great importance in this connection. ■

#### Notes

- 1 Detailed work programme on the follow-up of the objectives of Education and training systems in Europe, COM 2002/C 142/01
- 2 Promoting Language Learning and Linguistic Diversity: An Action Plan 2004–2006, COM (1003) 449 final, p. 9
- 3 For more on the subject of international qualifications, please see H. Borch and Dr. Peter Wordelmann: Internationalisierung des dualen Systems – Strategien und Forderungen in: BWP offprint from issue 4/2001, p. 5–10.
- 4 Part 1, Section 2, Para. 2 “Parts of vocational training may be completed abroad when this serves the training objectives. The aggregate duration of such segments shall not exceed one fourth of the total period of training stipulated in the training regulations.”



## Vocational Training Preparation – A new concept of vocational preparation for learning-impaired and socially disadvantaged young people

► Vocational preparation schemes are in a state of upheaval. The present public employment services measures will merge into three qualification levels of a new concept. Up to now the legislators have formulated clearly delineated guidelines for vocational preparation schemes as an integral part of the Vocational Education and Training Act (BBiG) and introduced a new term for them, Vocational Training Preparation.

This article will show some of the differences between Vocational Training Preparation and the new concept of the public employment services. It will show some of the reasons for the existing differences and at the same time indicate some of the preconditions for resolving them.

### From vocational preparation to vocational training preparation

Vocational preparation schemes were introduced during the worldwide economic crisis, after World War II and after 1974 in the western part of Germany as a response to four developments:

(1) In 1969 the Vocational Education and Training Act entered into force, § 28, paragraph 2 of which stipulated that young people under 18 years of age could only be trained in recognised training occupations. The semi-skilled training provided by companies until then, which was losing importance, was abolished by the exclusivity principle in the Vocational Education and Training Act (BBiG) for young people under 18 years of age. It was replaced by the “vocational preparation schemes” funded by the public employment services and/or the federal states, the participants in which were prepared either for employment or for initial vocational training. Thus despite the exclusivity principle of the BBiG there continued to be young semi-skilled workers available on the labour market.

(2) Notwithstanding the provisions of § 28 BBiG, it continued to be and still is permissible to employ young people under the age of 18 in regular employment. But in the long run it turned out not to be very attractive for companies to employ young people of compulsory vocational school age. The practice of dividing up periods of vocational school attendance and shifting them to times when the young workers<sup>1</sup> were unemployed<sup>2</sup> did nothing to improve the situation, often considered annoying, in which young workers were placed in part-time vocational schools. The young people were able to perform their part-time vocational duty by taking part in vocational preparation schemes before taking up a job. After that year they were available to the labour market without restrictions.



**DIETMAR ZIELKE**

Former Research Associate of Section  
“Vocational Learning Pathways and Training  
Careers / Promotion of Target Groups”, BIBB



(3) Vocational preparation schemes were introduced in periods when training places were not in sufficient supply. The number of participants increases when apprenticeships are scarce. Thus vocational preparation was also created as a substitute in the absence of training places, and contributes in no small measure to reducing the number of young people without training places. Thus in the 2002/2003 school year there were about 79,500 young people in the school vocational preparation year, and the number of participants has increased continuously since 1993.<sup>3</sup> The vocational preparation schemes of the public employment services had an annual average of 108,018 participants in 2003, so that the total number of persons in vocational preparation schemes in 2003 was 187,000.<sup>4</sup>

(4) After completion of full-time compulsory schooling, many young people are not yet capable of choosing a course of vocational education and training. They are often termed “not yet ripe for training”. Another reason for introducing vocational preparation schemes was to give them the possibility of choosing a recognised occupation and preparing for a course of vocational education and training.

The heterogeneity of the addressees made it necessary from the beginning to differentiate the vocational preparation schemes. Up to August 2004 a total of eleven different measures were implemented in Germany in the employment services sphere (including special measures for young people with disabilities).

The course was set for a re-orientation of vocational preparation schemes in 1999 in the context of the Alliance for Jobs. The goal was to establish not only a link in content but also an organisational link with vocational education and training. The qualifications acquired were to be certified. In addition, periods of company training were to be given more weight in vocational preparation. For that purpose, enterprises were to be recruited that had not previously been providing training or were unable to provide

full training.<sup>5</sup> The results of the Alliance opened up the possibility of dividing up the work between companies and education providers. All the practical technical training can be provided in the context of periods of practical company training. All other training activities, especially the social-pedagogic work, can be undertaken by education providers. The *Basic Training Courses (G)* of the public employment services functioned as a general model for the further development of vocational preparation schemes. They are characterised by two features: the recipients are trainable young people whose training objective is to begin vocational training.

Since the January 1, 2003 amendment of the BBiG, vocational preparation schemes have been an integral part of the BBiG. The discrete term “*vocational training preparation*” was chosen for them. The legislators adhered to the Alliance concept while at the same time making it more precise. Vocational training preparation is now rigidly oriented towards subsequent vocational training. Its content, which can be imparted in the form of qualification modules, should therefore be derived from recognised training occupations or comparable training occupations. The targeted certification of qualifications acquired is also a part of the vocational training preparation. Guidelines for developing qualification modules and the targeted certification were enacted in the form of an ordinance (BAVBVO).<sup>6</sup>

However, vocational training preparation addresses a target group that is quite distinct from that in the G-courses, which served as a model for the Alliance decision. The target group includes only learning-impaired or socially disadvantaged young people who are not yet capable of commencing vocational education and training with any prospect of success. Those not provided with apprenticeships are explicitly excluded from the recipients of vocational training preparation.

For learning-impaired or socially disadvantaged young people, the training target could only be achieved if principles were implemented in vocational training preparation that had proved their worth in the training of disadvantaged young people. In that respect it is only logical that the legislators should prescribe the individualisation of vocational training preparation and comprehensive social-pedagogic supervision of the participants.

#### Qualification modules

- qualify one to do a job that is part of the training in a recognised training occupation or equivalent vocational training,
- have a binding reference to the skills and knowledge included in the training framework of the corresponding training regulation or to the training content of an equivalent course of training,
- should have a placement volume of between 140 and 420 hours,
- end with an ascertainment of performance.<sup>7</sup>

## Qualification modules as the innovative core of vocational training preparation

Fundamentals of the ability to perform in a profession have to be imparted in vocational training preparation. That can be done through the use of qualification modules that are described as learning units, limited in content and time, that have a series of specific features. (cf. inset, p. 37)

Qualification modules are currently being developed in many places. Initial orientation aids for this task exist for the providers of vocational preparation schemes. They differ substantially in concept and detail, especially in the degree of their orientation on the guidelines of those enacting laws and ordinances for the development of qualification modules for vocational training preparation.<sup>8</sup>

It is proposed in the orientation aids of BIBB that the following quality standards should serve as orientation in future for the development of qualification modules for vocational training preparation:<sup>9</sup>

### *Adherence to formal standards*

Qualification modules shall be described in qualification descriptions. The data to be entered are to be found in Annex 1 of the BAVBVO. The developers of qualification modules should adhere strictly to those guidelines and thus help ensure that even though they have been developed by a wide range of education providers and for various recognised training occupations they can be unequivocally identified as qualification modules for vocational training preparation.

### *Content geared to training occupation*

Activities are to be described in the qualification descriptions that are derived from the framework training plan of a recognised training occupation (or equivalent vocational training), i.e. only those activities that are an integral part of the vocational training are to be imparted in vocational training preparation.

### *The ability to act in a vocation as didactic orientation*

Developers should select in particular those activities that open up learning opportunities for the participants corresponding to those in action-oriented vocational training.

### *Target group orientation when determining training time*

The time corridor of 140 to 420 hours is a binding stipulation for the duration of placement. It is intended to ensure that participants in vocational training preparation have not just “acquainted themselves with” the activities contained in the qualification description but really master them at a level corresponding to that of vocational education and training. The large time margin is intended to

ensure that the target can be aspired to under the conditions given, and will also be achieved if possible.

### *Regionalisation of curriculum work*

The individual providers of vocational training preparation are required under § 3 paragraph 2 BAVBVO in conjunction with § 51 paragraph 2 BBiG to develop qualification modules (if qualification modules are to be used in their vocational training preparation). In the words of § 3 paragraph 2 BAVBVO this is a binding stipulation of the enactors of the ordinance. It is the precondition for ensuring that the given training conditions of the individual provider can be taken into account when qualification modules are developed.<sup>10</sup>



## Stumbling blocks: Vocational training preparation facing the acid test

At the present time, however, the clarification undertaken in vocational training preparation, while welcome from the education policy standpoint, is normative only; for it is still vocational preparation that is being carried out in the form of vocational preparation years at vocational schools and in particular vocational preparation schemes of the public employment services, which as of September 2004 may only be carried out in the form of a new concept,<sup>11</sup> and not “vocational training preparation”.

Since it is not possible to predict that the legislators will budget for incentive funds so that vocational training preparation can be carried out according to their stipulations, in fact, apart from what is offered in school and independent social work measures for youth, only the vocational preparation schemes of the new concept will be implemented. For them, however, the Social Code (SGB) Book III is the decisive standard and the unlimited implementation rules of the Federal Employment Services are the decisive stipulations for the providers of such measures.

### Features of vocational training preparation under the terms of the BBiG and the new technical concept of the public employment services

Circumstances	Vocational training preparation under the terms of the BBiG	New technical concept of the Federal Employment Services
Target group	Learning-impaired or socially disadvantaged persons who are not yet capable of commencing vocational training (§ 50 paragraph 1 BBiG).	Persons not provided for under 25 years of age, irrespective of their school background and irrespective of whether or not they are personally capable of commencing vocational education and training (new concept, pp. 2 and 8).
Training target	Leading to vocational training in a recognised training occupation or equivalent vocational training (§ 1 paragraph 1 a BBiG)	Alternatively: commencement of training or commencement of employment (new concept, p. 2)
Stipulation regarding design and implementation of measures	Vocational training preparation must correspond to the special needs of the target group in content, type, goal and duration and be accompanied by comprehensive social-pedagogic guidance and support (§ 50 paragraph 2 BBiG).	The measures (qualification modules) must be geared to the participants and offer on-the-job qualification (new concept, p. 18).
Use of qualification modules	Qualification modules pursuant to BBiG and BAVBVO can be used (§ 51 paragraph 1 BBiG and § 3 paragraph 1 BAVBVO).	The content of the educational measures for vocational preparation is generally offered in the form of "promotion and qualification sequences" (new concept, p. 17)  Qualification modules pursuant to §§ 50 ff. BBiG and BAVBVO are the "central element" for imparting basic vocational skills. They "have to be tailored to the specific target groups and fulfil defined standards and legal stipulations" (new concept, p. 18).
Content of qualification modules	Selected content from recognised training occupations or equivalent courses of vocational training only (§ 51 paragraph 2 BBiG).	Basic inter-occupational qualifications or elements of a course of vocational education and training (new concept, p. 18)
Providers of vocational training preparation	Both enterprises and education providers. Enterprises where possible (Bundestag document 15/26 re § 50 paragraph 2 and § 52 paragraph 2 BBiG).	Education providers (in close cooperation with enterprises pursuant to the new concept, p. 20).

The reason for this parallel existence of vocational training preparation and the actually implemented or planned vocational preparation schemes is that there are no provisions in the BBiG for vocational training preparation which could operate as an "exclusivity principle" such as exists in § 28 for vocational training.

### An unresolved relationship: Vocational training preparation and the new concept of the Federal Employment Services

The main features of the new technical concept have been developed since January 2001 in independent pilot projects<sup>12</sup>. To start with, all participants are subjected to an admission analysis. After that they are assigned to the various qualification levels, elementary stage, promotion stage and transitional qualification. The direct transition from the admission analysis to a course of training or a job is also possible. All qualification levels can either be attended one after the other or alternatively attained

through direct transition to one of the higher qualification levels.

Two questions that have not been resolved are whether the existing vocational preparation schemes of the employment services are "vocational training preparation" under the terms of the BBiG and which of the qualification levels of the new concept can be considered to be vocational training preparation, for which recourse can legitimately be had to the instruments created for vocational training preparation and for which there are binding stipulations in the BAVBVO.

However, there are also some irreconcilable discrepancies between the stipulations of the Federal Employment Services in the new concept and what the BBiG says about vocational training preparation (see overview). They lead to irritations in the run-up to the introduction of the new concept. One thing seems very clear, however: it is certain that only a part of the qualification levels of the new concept can be considered vocational training preparation, and that only under the precondition that they comply with all the features of vocational training preparation listed in the overview.

## Outlook

The BBiG's vocational training preparation offers a chance to ensure that in future vocational preparation schemes will be implemented only for those young people who really need them. For young people who go through vocational preparation schemes because they have not found a training place, the Law on Securing Vocational Training<sup>13</sup> offers a new prospect of access to vocational education and training. The two instruments, BBiG vocational training preparation and apprenticeship funding pursuant to the Law on Securing Vocational Training, comprise a harmonised concept, the implementation of which could help enable and accelerate the admission of many young people to vocational education and training. Last but not least, this would mean an end to the squandering of substantial resources in the field of vocational preparation, since there are many young people in these schemes who actually would like to complete a course of vocational training and have the aptitude to do so without any special preparation.

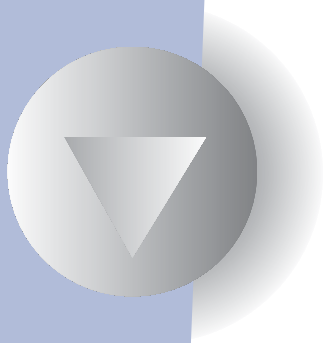
As long as the Law on Securing Vocational Training has not come into effect and cannot develop the hoped-for

effect, the new concept of the public employment services (together with the vocational preparation years at the vocational schools) will take over the sponge function of vocational preparation, since an independent offer of vocational training preparation does not exist. Nevertheless, essential features of the BBiG's vocational training preparation have had a deciding influence in shaping the new concept of the public employment services. These include the greater alignment of the content of vocational preparation with the content of vocational training in the form of qualification modules, and the intention to involve enterprises to a greater extent.

The existing discrepancies between the provisions on vocational training preparation and the assertions in the new concept can be attributed to the fact that the new concept necessarily has to cover a much wider range of vocational preparation schemes than is intended with vocational training preparation. Only when no one but the young people for whom it is intended are taking part in the employment services' vocational preparation schemes will the preconditions be given for the employment services' vocational preparation schemes to correspond to the stipulation of the BBiG on vocational training preparation. ■

### Notes

- 1 Cf. Herkert, § 19, RdNr. 5 a. If the young unskilled workers are of compulsory vocational school age they are called young workers (or young office workers).
- 2 Thus in gardening enterprises, for example, young workers were laid off in winter when there was little work to be done and re-hired at the beginning of the gardening season. The young people were then given "schooling" during that enforced break.
- 3 Report on Vocational Education and Training 2003, Chapter 2.5.1.
- 4 Those participating in independent courses offered by Youth Social Work on the basis of SGB VIII are not included.
- 5 Alliance for Jobs. Decision of 29th March 1999: Content linkage and organisational linkage of vocational preparation education measures and subsequent vocational education and training, p. 1
- 6 Verordnung über die Bescheinigung von Grundlagen beruflicher Handlungsfähigkeit im Rahmen der Berufsausbildungsvorbereitung (Berufsausbildungsvorbereitungs-Bescheinigungsverordnung BAVBVO) of July 16, 2003 (BGBl I No. 36, pp. 1472 ff. of July 21, 2003) (Ordinance Concerning the Certification of Fundamentals of Vocational Capacity to Act in the Context of Vocational Training Preparation)
- 7 Cf. § 3 of Verordnung über die Bescheinigung von Grundlagen beruflicher Handlungsfähigkeit im Rahmen der Berufsausbildungsvorbereitung (Berufsausbildungsvorbereitungs-Bescheinigungsverordnung BAVBVO) of July 16, 2003 (BGBl I No. 36, pp. 1472 ff. of July 21, 2003) (Ordinance Concerning the Certification of Fundamentals of Vocational Capacity to Act in the Context of Vocational Training Preparation)
- 8 Borsdorf, E. et al.: Entwicklung und Einsatz von Qualifizierungsbausteinen in der Berufsausbildungsvorbereitung. Offenbach: IINBAS 2003 (Berichte und Materialien, volume 10); ZDH and ZWH (ed.): Qualifizierungsbausteine im Handwerk. Grundkonzeption. Berlin and Düsseldorf 2003. BIBB team of authors Brötz, Elsner, Gathmann, Mettn, Rütter, Schwarz, Webers, Westphal, Zielke: Vocational Training Preparation. Entwicklung von Qualifizierungsbausteinen. Bonn, March 2004
- 9 In addition to the database of qualification modules, the examples and practical aids developed by BIBB for the development of qualification modules and the relevant legal bases are to be found under [www.good-practice.bibb.de](http://www.good-practice.bibb.de).
- 10 In individual cases that do not rule out the adoption of already existing qualification modules, if scrutiny by the provider does not indicate the need to modify the qualification module, and if no third party rights are violated through such adoption (respect of copyright).
- 11 Bundesagentur für Arbeit: Berufsvorbereitende Bildungsmaßnahmen. Neues Fachkonzept. January 12, 2004.
- 12 Cf. the April 2003 issue (No 16) of the journal Direkt: Fördern und Qualifizieren, devoted to the development initiative "New Support Structure for Young People with Special Support Requirements".
- 13 Cf. Draft of the Gesetz zur Sicherung und Förderung des Fachkräftenachwuchses und der Berufsausbildungschancen der jungen Generation (Berufsausbildungssicherungsgesetz – BerASichG), BT document 15/2820 of March 30, 2004



## What does it mean to provide process-oriented training?

► The new training regulations stipulate the demand for “process-oriented” implementation of training, with the goal of simplifying the adaptation of training to the requirements of industrial work processes and the rapid technological and organisational transformations. The current regulations specify business tasks which are described in general terms, and the enterprises have to provide the clear definition of the content themselves. This article describes the consequences for the implementation of training which arise from process orientation, and designates the new tasks connected with it and the skills requirements for the personnel involved.

**ANKE BAHL**

Research Associate in the “Skills and Competences Development” Section at BIBB

**JOHANNES KOCH**

Head of “Friedrichsdorfer Büro für Bildungsplanung”, Berlin

**EGON MEERTEN**

Doctor of Pedagogy, Research Associate in the “Development Programmes / Pilot Projects” Section at BIBB

**GERT ZINKE**

Doctor of Pedagogy, Research Associate in the “Quality Assurance and Development / Distance Learning” Section at BIBB

A fundamentally different, that is, process-oriented approach to structuring new training regulations has been introduced with the reorganisation of the metal and electrical occupations in 2003 and 2004, if not before. This has created essential prerequisites for process-oriented initial training.<sup>1</sup> Important factors in this process are transformations in the following areas, among others:

Changed organisational concepts in the enterprises lead to more complex occupational tasks and require a higher degree of self-reliance and ability to organise.

- The accelerated technological development (especially in ICT) renders reactive development of training regulations unfeasible.
- Quality assurance, not by controlling results but by stipulating processes (ISO 9000 ff.).
- Current concepts of learning and instructional theory legitimise a process-oriented approach in training.
- Training increasingly takes place in a decentralised way in professional contexts/processes, i.e. in close proximity to the workplace.

The role of training regulations is to provide a clear and legally binding identification of the skills that must be imparted during training. This positive description of the training content has so far not only made it difficult to adapt the content to the progress in technology and organisation but also has not taken company peculiarities into account. Finding a replacement for the identification of such concrete skills, knowledge and qualifications therefore became a necessity for the development of regulations. This replacement turned out to be the stipulation of core and occupation-specific skills, which are imparted in a “process-oriented” way on the basis of occupation-specific tasks and then expanded in a deployment area.<sup>2</sup> One thing that will change because of process orientation is the understanding of the occupation concept: the uniformly recognised federal minimum requirements for an occupation are no longer tied to mastering specific technologies and

manufacturing methods but to mastering certain occupation-specific work processes. Occupational profiles are generated via skills.

## Requirements of the new training regulations

Two new requirements have been introduced with the process-oriented training regulations:

1. The clear definition of the content prescribed in the training regulations has to be derived from output processes in the enterprise. This constitutes a new task for the trainers.
2. Imparting “process competence” is the goal of the training provided. This includes two important dimensions: On the one hand the ability to act competently within the company framework – in this sense, “process competence” is an element of action competence integrated into a process. On the other hand it implies the ability to shape and change processes with a view to optimising quality and efficiency.

### DERIVATION FROM COMPANY PROCESSES

The requirement of providing “process-oriented” training is meant to allow enterprises to adapt their training to the state of technological and organisational development. The training regulations specify only typical occupational tasks/bundles of activities; the technologies used for them have to be derived from processes in the enterprise. In this way the state of technology in the respective company providing training becomes the standard. This means that different content is imparted, which is not considered as a problem. For example, if the training regulation prescribes the process “Installation and configuration of IT systems”, it is for the company to decide which operating system will be used. It could be Windows, Linux, Unix or even Windows CE. The stipulation of process orientation means that the technologies utilised in the company must be taught during the period of training.

The consequences of process orientation for basic vocational education are not entirely clear. Are the concepts of general basic education and process orientation mutually exclusive because general and broad basic education usually imparts content that is not needed in this form in the enterprise? Process-oriented training regulations no longer prescribe general basic content. This does not mean that carrying out basic education is explicitly prohibited. However, it does not correspond to the intentions of this new form of training. Still, common and non-occupation-specific content within an occupational field is not to be

dispensed with. But instead of a common basic education for a particular occupational field,<sup>3</sup> process-oriented training regulations stipulate common core skills. They must be binding parts of the training content, just like the occupation-specific skills.

### PROCESS COMPETENCE

What is to be taught as process competence is stipulated only in very general terms by the new training regulations. Formally speaking, the competence to act is concretised in company processes. Which processes these are specifically is not stipulated in the training regulations. On the one hand this gives the companies providing training an additional window of opportunity. On the other hand this vagueness has led to misunderstandings up to now in the discussion on “process orientation” which have made its practical implementation more difficult. Everyone interprets the orientation as applying to the context in which they are dealing with “processes”.

Our assumption is that for the implementation of open-design training regulations, processes can be differentiated on three levels:

First level: Business processes

A business process is the sum of all company activities<sup>4</sup> that produce and support a value (a service or product) for the customers. In their totality they implement the business purpose of an enterprise, starting with the placing of orders and ending with the receipt of an agreed outcome by the customer. A business process can be subdivided into sub-processes through repeated divisions, down to the individual activities.

Second level: Output processes

In business management and elsewhere, the company organisation of all activities that are required for the faultless production of the output are described as the output process.

Third level: Work processes

The term work process refers to the sequence of individual work steps and describes how job tasks are carried out. It can be seen as a differentiating sub-unit of output processes.

The link with business processes is unproblematic. They are usually described for enterprises, and trainees can easily find out about them for themselves from the relevant documents. The work processes can also be defined unequivocally. Those are the processes the trainees are supposed to be able to carry out.

For teaching process competence, one will have to refer above all to the middle level, which is called the output process here. The reason is that goods and services are usually performed cooperatively by employees with different occupations. However this process is defined and delineated, it will comprise more job activities than can be performed by the trainee. According to more recent production concepts, however, the main thing is that despite their different occupations, employees should be capable of consulting among themselves about process optimisation. Process competence can thus be defined as the ability to make an active contribution to that optimisation.<sup>5</sup> It is proposed here that the process that the employees are supposed to help shape be defined as the output process. Thus the definition must dynamically follow the organisational development of the enterprise. (cf. Fig. 1)

## Process-oriented planning and execution of training

### STIPULATING IN-COMPANY LEARNING SITES

Three decisions have to be made in advance of carrying out process-oriented training:

1. Which company output processes is the training to relate to?
2. Should training be given directly in the company output processes or removed from them?
3. In what order should the job tasks be taught in the selected output process?

Another question needing clarification is how optimum harmonisation can be achieved between vocational school and training enterprise. Analysis of the business, output and work processes in the enterprise must always be the basis of in-company decentralised training. It is possible to determine on the basis of the occupation-specific technical skills that have to be taught pursuant to the training regulation and the common core skills which workplaces and tasks or sub-tasks are suitable for teaching those skills. A corresponding flow chart can be made.

The output processes suitable for carrying out the training can certainly not always be deduced from the training regulations. Often the job description items will not correspond with the company organisation items. To conduct the training in a process-oriented manner, one follows the company organisation and then checks whether all the content to be taught is covered. If training in the company output processes is not possible, i.e. instruction must be removed from those processes, it should nevertheless be aligned to real tasks or a concrete process. In such cases, however, trainees should know the company process well. That can be achieved through exploration tours, for example.

Figure 1 Identification of suitable work process steps

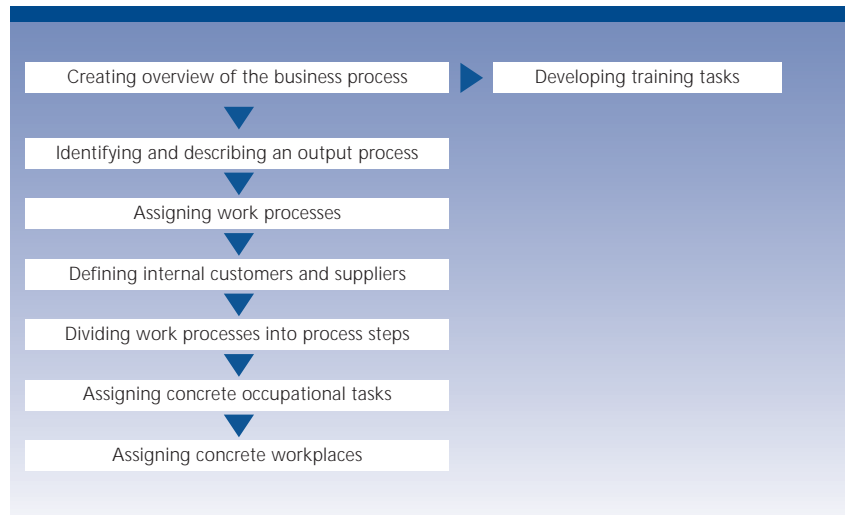
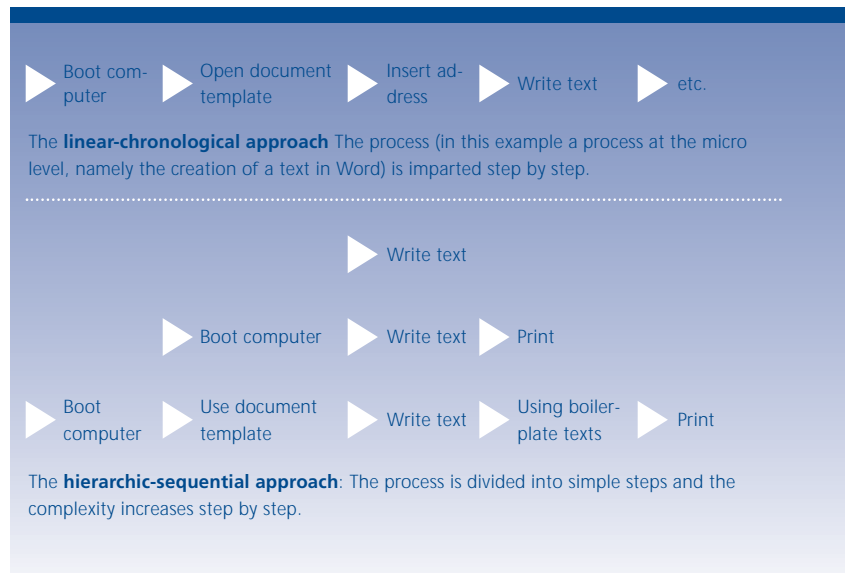


Figure 2 Planning of occupational tasks



### STIPULATION OF OCCUPATIONAL TASKS

The requirement that training be process-oriented suggests that one should also let oneself be guided by the specific output process in teaching individual occupational tasks. In principle there are two different approaches to how that can be systematically planned: firstly the linear-chronological approach and secondly the hierarchic-sequential approach (cf. Fig. 2).

*Linear-chronological* means dealing with all the tasks in a process one after the other. In the process, individual action steps can be presented in more or less detail, so that as training progresses, more complex and complicated relationships can be dealt with. This approach is only appropriate if business and output processes are not too complex. Under the pedagogic postulate of “completeness”, some tasks will be dealt with that are ordinarily performed co-

operatively. This form is implemented particularly consistently through the concept of “learning on the basis of customer orders” for training in the crafts.

*Hierarchic-sequential* means that the occupational tasks in one process are divided into individual sequences and the training-relevant ones are selected from these. The sequences increase in scope and difficulty and hence in complexity as well. The hierarchy of tasks arises from that. One starts with as simple a task as possible. Before that, the process as a whole should be dealt with (creation of an orientation base) so that the trainees can classify the individual tasks correctly.

#### PREPARING LEARNING TASKS

Often the occupational tasks required in the process are too difficult at first to be performed by the trainees. They have to be separated into sub-tasks and require didactic reduction.

The so-called learning tasks are a form of the hierarchic-sequential approach that is especially suitable for process-oriented training.<sup>6</sup> These should meet two requirements:

1. Learning tasks should be so easy that trainees can acquire the relevant knowledge through their own work.
2. Each learning task should provide the preconditions for the next. A system of learning tasks therefore always prescribes the order in which the tasks will be dealt with.

One starts the task planning with a so-called core task. This task should be as typical of the work in the process as possible. The core task is systematically expanded. The expansion can take place in two directions: on the one hand, the difficulty of the task can be increased and on the other, one can have preceding or following tasks dealt with within the process. The expansion continues until all the work processes to be learned have been mastered.

#### INTEGRATION OF VIRTUAL LEARNING OPPORTUNITIES

Virtual learning opportunities can support process-oriented training in a variety of ways, e.g.:

1. Integrating Internet-based learning systems to support process-oriented training organisation;
2. Using online communities as problem-solving aids<sup>7</sup> in the context of on-the-job learning arrangements;
3. Open learning architectures as additional information, communication and cooperation opportunities<sup>8</sup> in the sense of optional learning opportunities and for opening up individual roads to learning.

## Need for virtual learning opportunities

Using these virtual learning opportunities is becoming more and more urgent in view of the progressive specialisation and constant development of technology. Not all specialised qualifications relating to occupational

tasks and processes typical of the vocation can be taught to the same extent at the present learning venues, since the expertise of the training personnel and the equipment of the installations are insufficient. Another reason why virtual learning opportunities are needed is that, when first approached, processes can often be better visualised and taught via virtual models and simulations.

## Interlocking of company-based and school-based learning venues

Process orientation is not only a matter concerning in-company training. Instead, the concept of the training regulations includes the idea of making vocational school training more practically oriented as well. The theoretical parts of the occupational training content are therefore no longer structured systematically by subject but process-oriented by *learning fields*. The educational mission of the vocational schools is formally regulated in a decision of the Conference of the Ministers of Education of March 15, 1991. There the main focus is on the acquisition of occupational ability. The training regulations prescribe the didactic principle of using situations which are important for doing a job as points of reference. The starting point is formed by actions which the learners have to plan, implement, evaluate, correct (if necessary) and finally assess as independently as possible.<sup>9</sup> The complete action model and process orientation thus serve as orientation for both vocational school and in-company training. The teaching staff at the vocational schools have to use real company processes as a guideline, replacing the purely subject-centred system of teaching by a structure oriented on work processes. This paradigm shift requires a certain degree of flexibility on the part of the people involved. Since the contact to the companies often leaves much to be desired, there is also a certain danger that teaching takes place on the basis of assumed work processes which do not meet the actual requirements of company practice. Another obstacle turns out to be the fact that the timeframes of the learning fields in vocational school and the corresponding in-company training need to be coordinated, which is sometimes impossible for objective reasons. If school and enterprise are to be harmonised in this regard as much as possible, it is helpful if the schools and teachers make their annual planning transparent to the enterprises affected,

thus providing a starting point for communication and cooperation. This process can be supported and simplified by implementing joint areas of communication on the Internet (for example via mailing lists).

## Higher demands on the training staff

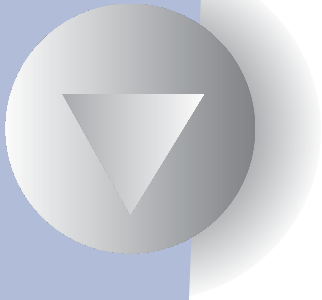
Process orientation as a new didactic concept<sup>10</sup> in education and training relates to organisational development as a whole and thus confronts the personnel in occupational pedagogy with fundamentally new tasks. The teaching staff are expected to start by identifying the business, output and work processes that are relevant for implementing the stipulations of the training regulation. The next step is to not only describe but also to analyse these processes, i.e. by dividing them into segments which form sub-processes representing meaningful units for teaching the trainees. The ensuing drawing up of learning tasks is a didactic challenge which requires close cooperation and professional exchange with the experts from production. This applies even more to the application of the learning tasks during the course of training. If they are to be learned directly within work processes, it is necessary to interfere with the organisation of work. In other words, the trainees are increasingly learning at the respective workplaces, in every case supported by learning assignments. These assignments are then evaluated on the basis of specific agreements with the trainer or the skilled worker in charge of training. The training staff plan, organise and moderate these training segments in coordination with the technical departments involved.

## Conclusion

The introduction of open-design training regulations presents new challenges for the training staff, challenges which they have not been prepared for sufficiently, if at all. Despite the temporary suspension of the Instructor Aptitude Ordinance (AEVO), or maybe even because of it, successful completion of a Training for Trainers course (AdA) is still considered as a sign of quality in a company career, and the courses offered by the Chambers continue to be in demand. But process orientation is not even a subject in the AEVO in its amended 1999 version, neither in field of action 2 "Planning the training" nor in field of action 4 "On-the-job training". Action orientation as a didactic background is not sufficient to qualify the trainers for determining the training requirements, drawing up activity analyses and developing learning tasks.<sup>11</sup> Apart from that, it is becoming increasingly common to assign training responsibilities to part-time trainers without any formal qualification, i.e. to the so-called skilled workers providing training. An enormous demand for qualification is emerging here which needs to be satisfied at all levels. We need the theoretical foundations for a new didactics, the establishment of a new qualification standard in occupational pedagogy with new role profiles for the education personnel (both in the company and at school), and of course a transformation in company organisation and in the employees as a whole.<sup>12</sup> ■

### Notes

- 1 It is interesting that the importance of process orientation for a viable reform of vocational education and training has already been pointed out in 1985 by Kruse (Kruse, W.: *Von der Notwendigkeit des Arbeitsprozeß-Wissens*. In: Schweitzer, J. (ed.): *Bildung für eine menschliche Zukunft*. Munich 1986, pp. 188–193)
- 2 Compare in this regard § 3 of the respective ordinances
- 3 This terminology is still used in § 3 (Electrical and metal) but refers only to the first year of training, and only if that training takes the form of a Basic Occupational Education Year.
- 4 In the DGQ terminology this refers to core processes, management processes (coordination, control, strategy) and support processes (information structure/knowledge management, quality management, infrastructure). On the description of business processes cf. Bullinger, H. J.; Warnecke, H. J.; Westkämper, E. (eds.): *Neue Organisationsformen im Unternehmen*. 2nd, revised and expanded edition. Heidelberg, New York 2003, p. 747
- 5 Instruments which are utilised for this purpose in the respective organisational units of enterprises are, for example, quality/Kaizen circles. Please also refer to the model of the European Foundation for Quality Management [www.efqm.org/model\\_awards/model/excellence\\_model.htm](http://www.efqm.org/model_awards/model/excellence_model.htm)
- 6 Cf. for a more extensive discussion the respective self-learning modules by Koch, J.: "Handlungs- und prozessorientiert ausbilden" in the Learning Centre of the [foraus.de](http://foraus.de) forum [http://foraus.de/lernzentrum/handl\\_prozess\\_ausb/handlungs\\_auswahl.html](http://foraus.de/lernzentrum/handl_prozess_ausb/handlungs_auswahl.html)
- 7 Zinke, G.: *Lernen in der Arbeit mit Online-Communities – Chance für E-Learning in KMU*. In: BWP 32 (2003) 1, pp. 44–47
- 8 Cf. Zinke, G.: *Online-Communities in der Berufsbildung – Ergebnisse einer Online-Befragung und Ansatz für offene Lernarchitekturen* [www.bibb.de/de/wslk8503.htm](http://www.bibb.de/de/wslk8503.htm)
- 9 Cf. the "Verordnung über die Erprobung einer neuen Ausbildungsform für die Berufsausbildung in den industriellen Elektroberufen" and therein, the respective framework curricula Part III "Didaktische Grundsätze"
- 10 Cf. Koch, J.; Meerten, E.: *Prozessorientierte Qualifizierung – ein Paradigmenwechsel in der beruflichen Bildung*. In: BWP 32 (2003) 5, pp. 42–46
- 11 However, we should not even assume that the principle of action orientation has gained general acceptance. The 4-stage method still dominates the AEVO examination focus on instruction. Cf. Lauterbach, U.; Neß, H.: *Vier-Stufen-Methode oder handlungsorientierte Unterweisung?* In: *Die berufsbildende Schule* 52 (2000) 2, pp. 49–56
- 12 We would be happy to receive feedback on this article. For a public discussion we suggest the forum "Process-oriented training" on [foraus.de](http://foraus.de), to be found under <http://foraus.de> -> Member forums



## The examinations field of action: Interim evaluation and future prospects

► Examinations can be a motive force and a supporter of system development but they can also be a restraint and a drag on it. In the past 30 years, examinations have played both of those roles for “Training in Occupations”. In the first ten years they were a central means of developing quality assurance in vocational education and training, but subsequently they increasingly came under fire from all sides. The dual system of vocational education and training was undergoing all-round modernisation, but there was little change in examination practice. However, things have begun to move in the field of vocational examinations in the last five years. Innovations in examination models and examination structures have largely exhausted the possibilities of the traditional examination system. The changes in the examination system introduced up to now are therefore not the end but rather the beginning of an overdue process of reform.



**DAGMAR LENNARTZ**

Doctor of Philosophy, former Head of Section  
“Quality Assurance and Development /  
Distance Learning”, BIBB

### The 1970s: Development of quality assurance through examinations

There are two peculiarities above all that distinguish examinations under the Vocational Training Act (BBiG) from all other public and private examinations: they register and assess vocational skills, knowledge and capabilities according to standards laid down in or as legal ordinances.<sup>1</sup> They certify a qualification recognised federally (as a final examination/journeyman examination or further training examination under § 46 (2) BBiG).

After the Vocational Training Act came into force (1969), examinations in the dual system made a decisive contribution to the implementation of national vocational education and training standards. Firstly, through the examination requirements and examination questions as a secret training plan. Secondly, through the bindingly introduced “intermediate examination” arranged on an inter-company basis as a means of monitoring training progress in order to improve training success. This quality assurance concept was supported by the acceleration of the inter-regional development of examination questions.

### Traditional structures and forms of examinations

For a long time the structure of the intermediate and final examinations remained almost the same in all the recognised training occupations. The examination consisted of two parts: the written examination as a “knowledge test” and the practical examination termed a “skills test” in the industrial and technical field and a “practical exercise” in the commercial field. The latter was conducted as an oral examination. The traditional range of question types in the individual examination procedures was of manageable size as well.<sup>2</sup> In the *practical examination* there was a test piece and a work sample, although in the case of the test piece, only the final result was graded, that is, the product was assessed, while in the case of the work sample the

## Changes in examination practice

working procedure was assessed as well. The *written examinations* were based on two categories of questions: questions with a set answer (the so-called “programmed examination”) and the free-answer questions (the so-called “conventional examination”). From the wide spectrum of methods for *oral examinations*, two methods were mostly used in the final examination: the subject and examination talk in the practical exercise and the unstructured oral interview during the supplementary oral examination in industrial and technical occupations.

### Dispute about programmed examinations

Up until the early nineties, not much changed in the structure and the forms of examinations. The test piece and the work sample, the written examination with free or set answers and the oral examination continued to be the traditional forms of examinations, although the last named was something of an exception in the industrial and technical occupations.

However, trainers had already started to voice initial criticism in the seventies. It was sparked off by the “programmed examination” and its allegedly indispensable limitation to the registration of knowledge of details and facts, and culminated in the polarising controversy about “conventional versus programmed examinations”. The fact that, if enough was invested in development, the programmed form permitted the setting of quite complex tasks was largely ignored. As a rule, the fact that in practice the conventional written examination also dealt mainly with knowledge of detail and facts was not taken into account either.

The practical examination did not become the target of criticism quite as quickly. It, too, was seldom guided by real occupational activities at that time in a large number of occupations, especially in the industrial and technical professions. The possible reason for that blind spot was that the test piece and the work sample were close to reality in reflecting the training workshop training, which was oriented on planning and system: practicing skills with practice pieces, producing products for practice purposes, the production of what was known as “fancy scrap”.

It was only towards the end of the eighties that skills testing and knowledge testing were discussed in a synopsis, reference of the two parts of the examination to one another was demanded and the vision of a new testing structure was projected: the examination integrating theory and practice. The idea and concept of replacing the point-

by-point final examination by “testing in sections” had also been introduced into the debate by that time but was quickly forgotten by education policy-makers.

### The challenge of the 1980s: The “action orientation” training model

The next innovative advance for “training in occupations” was aimed directly at improving training quality. It brought new training models, new forms of learning and new training methods. The system of recognised training occupations now followed a skills concept that supplemented competence in the subject with method competence and social competence. The necessary consequences for examination practice, however, were not drawn.<sup>3</sup> The examinations in vocational education and training remained limited to their traditional structures and forms. They covered practical skills and theoretical knowledge but not thinking and acting with an orientation towards the work process.



In the training kitchen of the Vocational Training Centre for Crafts and Commercial Occupations – International Union – trainees have the chance to put their theoretical knowledge into practice

### The 1990s: Training and examination practice drift apart

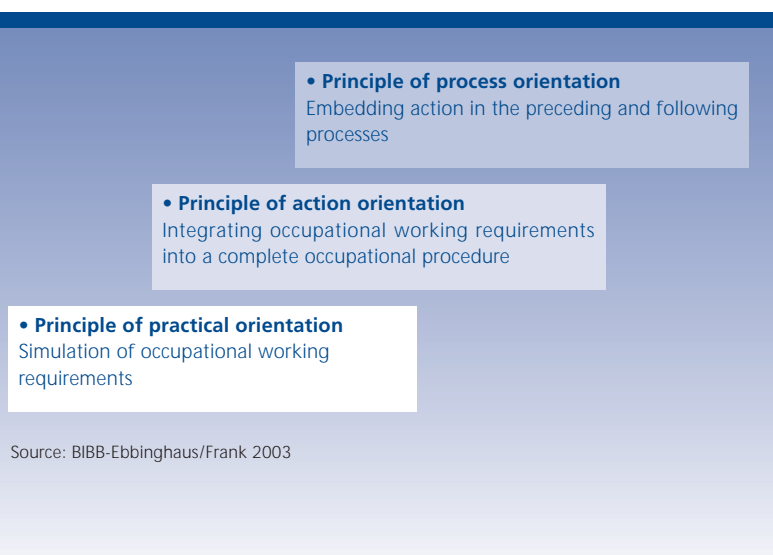
The replacement of traditional, usually function-oriented, organisational structures with process-oriented organisational forms revolutionised the (function-oriented) skilled labour profile established in the seventies as well: the importance of process-oriented qualifications increased at the same rate as the related trend towards more flexibility and individuality in training. The gap between training and examining increased just as rapidly. Criticism was no longer limited to individual parts of the examination and question forms, but was directed at the rigid examination structure with its subject-bound written examination sections on the

one hand, and the often highly isolated work samples and test pieces on the other.

### The first hesitant steps towards reform: Trying out a new examination structure

The breakthrough for practically oriented, action-oriented examination concepts came with the introduction (on a trial basis at first) of the “integrated examination” in the Engineering Draftsman/Draftswoman recognised training occupation (1994). In a approach that was the most uncompromising breach with existing examination structures to date, for the first time, no line was drawn between the theoretical and the practical parts of the examination. With an eye to the goal of “practical orientation”, the task developers were instructed to formulate questions related to real work situations.

Figure 1 Innovative forms of examinations – Guiding principles of skills detection



### Innovation target: Practically oriented examinations

The integrated examination model remained an isolated case. At the same time it had great innovative power. Within a very short time the participating bodies and institutions were able to shake off outdated concepts in modernising recognised training occupations and introduce new, practically oriented forms of examinations. In almost all the new and restructured occupations, tasks have been introduced in the past five years that are directed towards registering knowledge and skills in the forms of practical vocational action (cf. Figure 1).

Whether they were proclaimed to be integrated, complex or action-oriented, practically oriented forms of examinations pursued the goal of simulating a real vocational requirement situation in the examination. It is characteristic

of the current upheaval that this paradigm shift in examination requirements is still expressed in a multitude of concepts (cf. Figure 2).

### “Authenticity” as the new model

The “action orientation” and “practical orientation” models were soon overhauled by another model. With the new model, “authenticity”, the modernisation of the examination system at the same time experienced a revival and accentuation of the old controversy about centralised versus decentralised question formulation. It took place most particularly in the run-up to the current restructuring of the industrial metal-working professions and demanded an additional period of clarification.

While practical orientation is targeted at imitating professional work *requirements* and action orientation is based on the model of complete professional working *procedures*, the “authenticity” model now makes real work *processes* in a real working environment the subject matter of the examination. Authentic examinations do not reflect the reality of the company. They are a part of that reality. Processing and documentation takes place in the enterprise. The examination board assesses the technical discussion on the basis of documentation. So far the “authenticity” model has been implemented in eight newly created recognised training occupations, for the first time in the four information technology occupations with the “in-company project work” approach (1997).

### Variant model for examining process qualification

The evaluations of new forms of examinations up to now have shown that while authentic examinations make more comprehensive testing of “process competencies” possible, they cannot be implemented in every enterprise and every occupation, or at least not if uniform federal quality standards are to be adhered to. And more and more, the “variant model” revealed itself in the vehement debate about the future testing concept for the industrial metal-working occupations as a promising prospect by means of which the apparent irreconcilability of the positions (simulation versus authenticity) could be overcome.<sup>4</sup> It was implemented for the first time when the regulations for the new industrial electrical trades came into effect on 1 August 2003.<sup>5</sup>

The ramifications of that agreement are considerable. Standards for assessing and approving a company task have to be developed. Examiners have to be able to apply them, i.e. they have to possess the relevant skills and in particular the latest know-how, which changes rapidly. Again, the supra-regional examination-question developers face major

qualitative and quantitative challenges. Substantially more questions have to be made available in a very short period of time, and above all action-oriented, meaning qualitatively more demanding, questions need to be formulated. Enterprises, on the other hand, have to provide more action- and process-oriented training than before, and the precondition for that is that they explore and purposefully use the learning potential of occupational tasks. Standardised tasks, routine solutions and uniform questions are thus a thing of the past, as are examination preparations “in the tried and tested manner”, blindly swotting old examination questions.

### Factors in the success of innovative examination concepts

The evaluation of new forms of examinations has made bottlenecks and weak points in the examination system more sharply visible than before. The increase in quality made potentially possible by the new forms and structures of examinations can therefore be exploited only to a limited extent at the present time. The success of the new examination concepts depends on whether solutions to the fundamental problem of overcoming the bottlenecks and weak points can be found and implemented.

#### The examiners as factors in success

The recruitment of examination boards was already raising problems in the nineties, for various reasons:

*The traditional recruitment reservoir for examination boards is shrinking:*

- The number of full-time trainers is constantly decreasing; this particularly affects training in the recognised industrial and technical training occupations in manufacturing.
- The growing shortage of personnel in the vocational schools has recently become a problem.
- A generation shift of major proportions is currently taking place in the examination boards.

*“Honorary functions” have lost some of their attractiveness:*

- All members of examination boards work on an honorary basis.
- Innovative forms and methods of examinations make higher demands on the time of examiners.
- The investment in qualification for the examining business is increasing, and the new examination concepts in particular require a specific professional approach to testing.

Figure 2 New forms of examinations since 1997

Examination method	Form of examination	Synonyms
Practical examination	Simulated assignment	<ul style="list-style-type: none"> <li>• occupational task</li> <li>• task corresponding to a company assignment</li> <li>• manufacturing task corresponding to a customer order</li> <li>• complex task</li> <li>• complex occupational task</li> <li>• complex examination question</li> <li>• planning task</li> <li>• planning task referring to practical task</li> <li>• practical task</li> <li>• practical task in the context of case law application</li> <li>• project-oriented practical task</li> </ul>
	Company assignment	<ul style="list-style-type: none"> <li>• company project work</li> <li>• company project</li> <li>• independently performed specialised task in a deployment area</li> </ul>
Written examination	Integrated task	<ul style="list-style-type: none"> <li>• case study</li> <li>• complex practice-related task</li> <li>• planning task</li> <li>• planning task referring to practical task</li> <li>• practice-related task</li> <li>• practice-related cases</li> <li>• situational task</li> </ul>
Oral examination	Case-related subject discussion	<ul style="list-style-type: none"> <li>• elucidation of the practical task</li> <li>• technical discussion</li> <li>• technical discussion about the occupational task</li> <li>• technical discussion about the company assignment</li> <li>• technical discussion about a technical task independently carried out in the deployment area</li> <li>• technical discussion about the presentation of the project work</li> <li>• guest-oriented discussion</li> <li>• customer counselling talk</li> <li>• examination interview</li> </ul>

One central question that has to be clarified is whether the professionalism required of examiners can still be provided and ensured through honorary activity. It is absolutely necessary to find ways of bringing about greater professionalism in the examination boards that are at the same time affordable.

#### Task development as a factor in success

Through the examination questions, the goals of the examination are implemented, paradigm shifts are attained and reorientations are implemented – or missed. This insight has so far not really been taken to heart in the practice of developing tasks. It is true that isolated pilot experiments and pilot projects have tried out new avenues for action-oriented testing, but in practice the task developers

have not aggressively implemented or adapted and further developed the insights gained from them.<sup>6</sup>

If “practice” just serves as a disguise for simple knowledge questions or a job situation forms the backdrop for examining traditional knowledge, that alone does not make it action-oriented. In the same way, if single questions isolated from one another are placed in the context of the description of a general situation, that alone does not make the task integrated. Here too, the evaluation showed that orientation of the written questions around work areas and requirements typical of the occupation is not enough.<sup>7</sup>

*The current examination landscape: lively diversity, creative disarray, a feeling of optimism*

Even the practical examination does not necessarily run itself. Authentic examinations have problems with validity as well. The company assignment does not of itself guarantee that “professional action competence” will be meaningfully covered, just as the work process as such is no curriculum for process-oriented training. Limiting oneself to the assessment of authentic work samples involves the risk that only certain aspects of professional action competence will be covered.<sup>8</sup> This makes the formulation of problems to be solved in writing all the more important, since especially in the authentic examination they play the important part of supplementing practical vocational actions with a valid assessment of technical knowledge.

### Action orientation calls for new avenues in the formulation of questions

The current situation confronts supra-regional task-developers with a whole set of demands. The openness of the final examination to variation in design (implemented thus far in the recognised occupations of the chemical industry and the media) requires an incomparably greater diversity of variants than has been needed up to now. The examination models running parallel to one another when new examination structures are introduced or tested require sets of questions for the old and the new forms of examinations in each examination session. For those developing the tasks this also means, last but not least, twice the effort with fewer examinations per set of ques-

tions. Finally, the replacement of function orientation by process orientation on the job and in training also leads to new demands on those organising the examinations.

In view of future requirements, the formulators of examination questions must now tackle and master three key tasks:

- Defining standards for developing tasks
- Safeguarding standards
- Professional approach to the formulation of questions

### Professional approach to the formulation of questions

The questions for the exams in vocational education and training are still formulated on an honorary basis, by trainers and by vocational school teachers. In this area as well, there are now limits to honorary work. The formulation of questions for the new types of examinations not only takes more time, it also requires special competence. Competence for which trainers and teachers are not trained and which they do not require in their day-to-day professional work. One possible way out of this dilemma is the formation of combined teams of professional question formulators and honorary examiners (from companies and schools). Another is the systematic indexing of processes typical of the occupation through professional activity analyses. In that way a quality-assuring and at the same time flexibly usable foundation for continued honorary question formulation could be established.

### Paths to the future

The current testing landscape is characterised by a lively and, in comparison to the situation earlier, even an ebullient diversity, creative disarray and a feeling of optimism. Much is in upheaval, and with the reform projects and the reform options, new paths to the future are being created. By way of conclusion, the main goals of this process will be outlined below.

### The “Extended Final Examination” option

For a limited number of trades and technical occupations that have been or are about to be restructured, the autonomy of intermediate and final examinations and the differentiation of their functions is temporarily rescinded by means of trial ordinances. This leads to restructuring of the final examination (“extended final examination”). The intermediate examination becomes a credit-bearing part of the final examination, with the examination grade being derived from the weighted grades of the parts. The first trial ordinances were enacted in the summer of 2002 for

the laboratory and production occupations in the chemical industry. The trial ordinances for the recognised occupations of Precision Instrument Maker/Repairer and Locksmith for the automotive and industrial electrical occupations followed on 1st August 2003. The evaluation so far indicates a positive response.

As a long-term prospect, the extended final examination model opens up the (system-transforming) option of developing the traditional testing system of the dual system, based on point-by-point certification, into an account system with (at present) two sub-components, and reviving the fundamental ideal of flexible examination concepts in a new way and under different framework conditions.

### The “process-oriented examination” option

As the industrial metal and electrical occupations are restructured, the traditional structures and forms for those occupations as well will be replaced by a flexible, practically oriented examination concept implemented in the context of public examinations according to uniform federal standards. At the same time the “extended final examination” will be tested in the context of the new examination conception.<sup>9</sup>

The new examination concept for the industrial metal and electrical occupations combines a large number of innovative elements that have already been implemented. Because of its broad effect in companies providing training as in all other learning venues, competent agencies and examination boards and in regional and supra-regional task development, it creates a measure of change which, when consistently implemented, totally reshapes the training and examination landscape in this sector.

### Linkage of public examinations and private certification

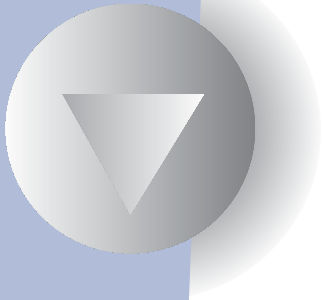
With the IT Continuing Education and Training Ordinance<sup>10</sup> enacted in the year 2002, completely new roads were taken in the examination system as well. Qualifications as IT specialists are acquired not through a public examination but in the context of a privately regulated certification procedure. What is certified is the knowledge acquired in the process of work, tested on the basis of documents presented (process-integrated documentation) and prescribed testing criteria. This is what is called “personal certification”, i.e. *individually described* competence is certified (and not a competence profile standardised to fit prescribed standards).

Through the IT Continuing Education and Training Ordinance, privately regulated certification procedures thus become a part of the publicly recognised qualification system. The “specialist certificate” is just the beginning, since in the overall concept only the second qualification level has proof of recognition through private certification; the first level, the IT occupations in the dual system, as well as the third and fourth levels (Bachelor and Master levels) end with a public examination.

However, the specialist certificate gives access to the third qualification level and is thus considered equivalent to the IT training certificates. Thus individually proven competencies more or less become public qualifications through private certification, something that never happened before. Herein lies the special reforming power (or explosive power) of the path taken with the IT continuing education and training concept. ■

#### Notes

- 1 The examination requirements for the final training examination/journeyman examination are a part of the training ordinance, which lays down the goals and content of the recognised training occupation in the form of a legal ordinance. Uniformly recognised federal training ordinances under § 46 (2) BBiG, on the other hand, regulate the examination requirements only.
- 2 Forms of testing are differentiations of the written, oral or practical testing procedures. See Federal Institute for Vocational Education and Training (ed.): *Wie entstehen Ausbildungsberufe. Leitfaden zur Erarbeitung von Ausbildungsordnungen mit Glossar*. Bielefeld 2003, p. 70.
- 3 One consequence of that omission (among other factors) is that clarification of the revised version of the examination is necessary preceding the current restructuring process in the metal and electrical occupations.
- 4 The variant model is a part of the skeleton agreement on restructuring the industrial metal trades reached by Gesamtmetall and IG Metall in October 2001. It provides for two variants for the work assignment with two fundamentally different procedures.
- 5 Cf. in this connection: Borch, H.; Weißmann, H.: *Neuordnung der Berufe in Industrie und Handwerk*. In: BWP 32 (2003) 5, pp. 9 ff.
- 6 An insight and overview is given, for example, by Schmidt, J. U. (ed.): *Zeitgemäß ausbilden – zeitgemäß prüfen*. Theorie und Praxis handlungsorientierter Ausbildung und Prüfung im kaufmännischen Bereich. Bielefeld 1998.
- 7 Ebbinghaus, M.: *Gestaltungsoffene Abschlussprüfung. Ergebnisse einer Prüferbefragung im Ausbildungsberuf Mediengestalter/Mediengestalterin für Digital- und Printmedien*. Bielefeld 2002.
- 8 Ebbinghaus, M.: *Anspruch und Wirklichkeit. Abschlussprüfung von Mechatronikern und Mechatronikerinnen*. Bielefeld 2003.
- 9 Cf. Borch, H.; Weißmann, H.: *loc. cit.*, pp. 12 f.
- 10 Borch, H./Weißmann, H. (ed.): *IT-Weiterbildung hat Niveau(s). Das neue IT-Weiterbildungskonzept für Facharbeiter und Seiteneinsteiger*. Bielefeld 2002.



## Costs and benefits of in-company vocational training

► In-company vocational education and training activities are not an end in themselves. In fact, they should bring about concrete benefits for the company. Vocational training can therefore be seen as an investment which has to yield a worthwhile return on costs in the long term. In a study by the Federal Institute for Vocational Education and Training (BIBB), a representative survey was conducted of some 2,500 companies involved in vocational training in the year 2001, in order to analyse the costs and benefits of training. It found that companies which directly provide in-company vocational training reap benefits on a substantial scale.



**URSULA BEICHT**

Associate in the "Vocational Training Supply and Demand / Training Participation" Section at BIBB



**HERMANN HERGET**

Research Associate in the "Integration and Employment" Section at BIBB



**GÜNTER WALDEN**

Doctor of Politics, Head of Section "Sociology and Economics of Vocational Education and Training", BIBB

### Central results of the study

#### 1. TRAINING COSTS

- **Cost breakdown:** Average annual costs incurred for in-house vocational training for all companies across Germany per trainee are as follows: staff costs for trainees (wages, social security contributions, mandatory and voluntary additional benefits) total € 8,269; staff costs for all staff involved in training (full- and part-time trainers) total € 5,893; the set-up and material costs of training total € 545.00. Miscellaneous costs (e.g. for training and teaching aids, examination fees, external courses, administration) total € 1,728.
- **Gross and net costs (full costs):** Taking all above costs into account (sum of the full costs), the total annual gross costs come to € 16,435 per trainee. Whilst undergoing training in-house, trainees are generally involved in productive activity, i.e. they are fulfilling tasks which are of economic benefit to the company. After deducting these average training returns of € 7,730, the net costs total € 8,705.
- **Cost differentials:** There are considerable differences between western and eastern Germany in terms of the level of costs (see Figure 1). The gross costs (full costs) are 29% lower in the east than in the west, and the net costs are 32% lower. A main reason for this is the varying level of both trainees' and general wages and salaries.

There are also considerable differences between *training sectors*: The highest gross costs are incurred in trade and industry, closely followed by the liberal professions and the civil service. Conversely, the gross costs are much lower in farming and the manual professions. The returns from training are similarly varied, and this alters the picture in terms of the net costs; the civil service profits least in this respect – the returns from the productive activity of its trainees are relatively small. The

lowest net costs by far were seen in agriculture as this sector achieves the second highest returns.

- **Total costs:** The average gross and net costs (full costs) can be used to calculate the total costs for in-house vocational training across the whole economy *in 2000*. The gross costs for *all trainees* in the whole of Germany are therefore € 27.68 billion, of which western Germany's share is € 23.31 billion and eastern Germany's € 4.37 billion. Germany's net costs total € 14.66 billion – € 12.43 billion in the west and € 2.23 billion in the east.
- **Cost trend:** The trend shown by these costs over the last ten years can only be demonstrated for two training sectors – industry and trade and the manual professions – in western Germany, as these were the only sectors included in BIBB's prior study from 1991. Between 1991 and 2000, the gross costs (full costs) rose by 17% in trade and industry and by 20% in the manual professions (see Figure 2). There was a slight reduction of 1% of net costs which is due to a strong increase of 49% in returns. Conversely, the net costs in the manual professions increased by 27% due to the fact that the increase in returns was relatively low (13%).

In both training sectors, the increase in costs for training staff was very low and considerably lower than the trend observed for wages and salaries. This indicates a more economical use of in-house trainers. In trade and industry, the high returns indicate a clear shift in the conception of training and the productive use of trainees: until a few years ago, training in larger industrial companies was predominantly done in the apprentices' workshop. More recently, however, training has moved back to the workplace, meaning that the trainees are now more heavily involved in the internal work process.

- **Gross and net costs (direct costs):** Not all costs included in the full cost calculation are additional costs incurred by training. In particular, staff costs for employees who are periodically involved in training alongside their actual tasks (part-time trainers) exist whether training is done or not. If such cost factors which are not training-dependent (direct cost calculation) are omitted, significantly lower costs result: in the direct cost calculation, the gross costs are € 10,178 and the net costs are € 2,448. The direct costs express the companies' additional cost burden caused by training, whilst the full costs provide information about the entire consumption of resources for training.

Figure 1 **Gross costs, returns and net costs (full costs) of in-house vocational training in 2000 (total) in western and eastern Germany by training sector** Average sums per trainee per year in Euro

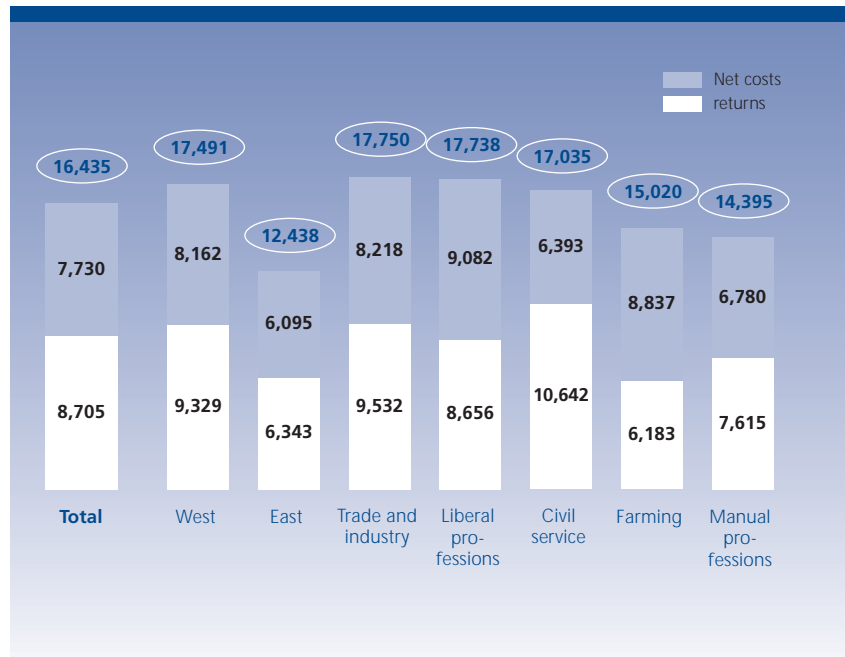


Figure 2 **Gross costs, returns and net costs (full costs) of in-house vocational training in trade and industry and the manual professions in western Germany from 1991 to 2000** Average sums per trainee per year in Euro



## 2. THE BENEFITS OF TRAINING

The provision of vocational training is linked to many advantages which companies that offer training have over those that do not. One significant advantage consists of *savings on costs* which would be incurred through the *use of external skilled workers* if no training were provided (see Figure 3). This benefit can be estimated and expressed in monetary terms.

Figure 3 **Net costs (direct costs) and benefits on in-house vocational training in 2000**  
Average sums in Euro



*in-house and then taken on permanently.* However, it must also be added that there are considerable differences between individual companies in the level of the savings which can be made on recruitment costs.

In addition to the training benefits expressed in monetary terms, there are *other important benefits* of training which cannot be quantified precisely:

- The risk of *inappropriate placement of employees and fluctuation* are considerably lower for skilled workers trained internally than for people recruited via the job market.
- Particularly significant is the avoidance of *shortfall costs* which arise when the demand for skilled workers cannot be met, resulting for instance in production bottlenecks and rejection of contracts.
- Even after induction, there are often *performance differences* between internally trained skilled workers and those recruited via the job market. Internally trained workers have a better understanding of the company's working processes and its production and service programme, for instance.
- Finally, training can play an important part in *improving the company's public image*, particularly amongst customers and suppliers.

The *savings on recruitment costs* consist of the following elements:

- Companies that provide training save on *staff recruitment costs* (advertising costs, staff to carry out interviews and select applicants). The average value of these savings across all companies was € 1,429 per new skilled worker.
- Above all, companies that provide training save on *induction costs* for staff recruited via the job market. The average cost here is € 3,927. Additionally, *savings of € 722* are made on *further training* for the new staff.

It should also be considered that, for a certain period of time, some companies pay skilled workers recruited via the job market wages or salaries which deviate from those of employees trained in their own company. Lower wages for external staff are more common than higher ones. External workers receive an average of € 313 less per year. If this advantage of employing external skilled workers is offset

A comparison of the costs and benefits of training should include the net costs after the direct cost calculation. This examination shows that the average full costs of € 7,344 incurred during a three-year training period are offset by a considerable, quantifiable benefit of € 5,765. If the beneficial aspects which cannot be measured in monetary terms are also taken into account, it becomes clear that recruiting skilled workers via the job market is, on the whole, more expensive than training new staff in-house. ■

against the savings resulting from providing training in-house discussed above, then the result is an average *total of € 5,765 in savings on recruitment costs for each skilled worker trained*

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Federal Institute for Vocational Education and Training (BIBB)

Robert-Schuman-Platz 3

D-53175 Bonn

Phone: +49-228-107-0

E-mail: [zentrale@bibb.de](mailto:zentrale@bibb.de)

Internet: [www.bibb.de](http://www.bibb.de)