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V O C A T I O N A L
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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

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► 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. ■

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The Federal Institute for Vocational Education and Training

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■ BWP - Berufsbildung in Wissenschaft und Praxis

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■ Overview and information

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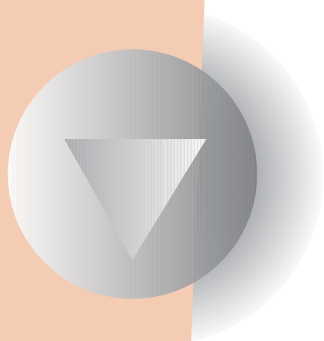
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Federal Institute for Vocational Training **BIBB**

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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.



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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.

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

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 techni-

sche 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.

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 Germany 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, that 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-

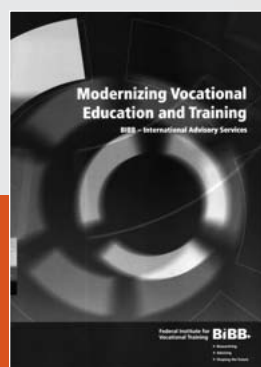
creasingly being recognised that occupational standards are important benchmarks for the quality of vocational education and training and its ability to close the gap internationally. Furthermore, they constitute a necessary reference framework in order to link the demand for occupational competences 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 the 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 at Bundesinstitut für Berufsbildung (BIBB), D-53142 Bonn, fax: + 49-228-1072967, E-Mail: 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 at 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

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 at 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

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BIBB

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 aims 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 cooperation 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

Geschäftsbericht des BIBB (annual)

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

Print and online version: www.bibb.de

Jahresbericht der GTZ (annual)

Ed.: Gesellschaft für Technische Zusammenarbeit, Eschborn

Print and online version: www.gtz.de/publikationen

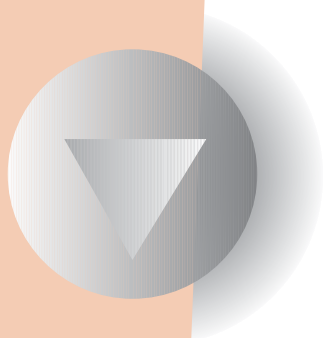
Dybowski, Gisela; Gajo, Michael

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

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

BIBB International: Strategiepapier zur Internationalisierung beruflicher Bildung

In: BWPspezial No. 7; supplement BWP 4/2002)



What purpose do national qualifications frameworks serve? – A look at other countries

► Looking at developments in other countries and at European level, this article outlines the objectives being pursued with the implementation of qualifications frameworks, what qualifications frameworks can do and possible approaches to them. Understood here as sets of skills, qualifications form the basic unit used in qualifications frameworks. Drawing on the examples provided by Ireland, England, Wales and Northern Ireland, the authors show how qualifications can be positioned in a hierarchical multi-level system with the help of descriptors in order to establish transparency and lateral mobility throughout an entire education system.

Germany's education system has a number of strong sub-systems that are largely detached from one another and exhibit little transparency or mobility between them, be it between vocational training and university education or between initial training and continuing training (vertical mobility). The same is true of horizontal mobility – in other words, switching from one training path or profile to another. For individuals, the recognition of acquired skills – and particularly and very importantly the transfer of credit for these skills, regardless of the form of vocational training involved, be it the “dual” vocational training system (which combines part-time vocational schooling with actual work experience) or full-time vocational school, or the skilled occupation for which the skills were acquired – means that they can avoid having to repeat subject matter needlessly and there is greater effectiveness in the way periods of training are treated. Could a national qualifications framework be of help here?

National qualifications frameworks – A global phenomenon

National qualifications frameworks (NQFs) are structures for developing, describing and systematising the relationships between qualifications.¹ An NQF takes all of a country's formally recognized qualifications and arranges them in a clearly defined structure. In this context, qualifications are understood as sets of certified or documented skills – with no regard given to the respective learning path. Qualifications frameworks make hierarchical distinctions between qualifications and categorise them by level. This vertical structure is complemented by a horizontal structure that subdivides qualifications of the same level into different types and then assigns them accordingly. Individual qualifications are classified on the basis of criteria (descriptors) which specify the degree of complexity, reflexivity and autonomy and/or the focus of a qualification's content.



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National qualifications frameworks (NQFs) were developed in a number of countries, particularly members of the Commonwealth, starting in the mid-1980s. Countries in other parts of the world such as the Middle East, Eastern and Western Europe also began developing NQFs in the 1990s. The development of national qualifications frameworks can definitely be called a global phenomenon.² In Anglo-Saxon countries, the initial motivation behind this was to open up access to acquiring vocational qualification. In other countries, the introduction of qualifications frameworks was undertaken in connection with a general overhaul of the respective education system. More recently, qualifications frameworks have been propagated as an instrument for fostering “life-long learning”.³

All national qualifications frameworks target two common goals. These are to:

- make qualifications transparent for users, learners and potential employers so that the former know what they have to learn and the latter know what they can expect;
- enable flexibility and transferability between different educational and occupational fields and between learning venues and, in doing so, eliminate barriers that currently block horizontal and vertical education paths.

National qualifications frameworks can serve other purposes as well. They can:

- foster the more rational design and development of qualifications;
- make it easier for government to steer skills development;
- foster educational mobility through the use of credit transfer systems;
- enhance the marketability of education offerings at international level;
- improve the representation of a country’s qualification potential in international statistics.

National qualifications frameworks go hand-in-hand with efforts to increase the autonomy of education institutions. In such cases, NQFs can help make institutions that are more self-governed accountable in terms of the outcomes they are to achieve/have achieved.

In ideal-typical terms, NQFs operate on the basis of the following assumptions⁴.

1. It is possible to describe all qualifications using *one single* set of descriptors.
2. A *single* set of levels is sufficient for depicting all qualifications.
3. All (sub-)qualifications can be described and assessed in terms of learning outcomes, regardless of the venue where they were acquired.
4. All qualifications can, in principle, be organised in units or unit standards for which a certain amount of learning

time can be assumed and corresponding credits can be granted. Furthermore, they can be assigned to the proper level within the qualifications hierarchy with the help of descriptors.

5. National qualifications frameworks provide the foundation for learner-centric training systems. NQFs open up options for individuals and, in doing so, assign them responsibility for organizing their respective education path.

Variations of qualifications frameworks have emerged in individual countries, depending upon how rigorously and fully the particular country follows these assumptions. There are “strict” frameworks in which all the above assumptions have been systematically implemented and “softer” frameworks in which compromises have been made.

Examples of national qualifications frameworks

Some national qualifications frameworks encompass all education sub-systems and cover all levels of education (including vocational training), while others differentiate between vocational and general education or between vocational training and higher education. Frameworks also differ in terms of their legal status. They can be voluntary or they can be founded on legislation, regulations or contractual agreements.

In some cases, qualifications frameworks incorporate mechanisms for recognizing smaller units or clusters of learning outcomes, as is done in Scotland. These mechanisms are known as credit systems. With the help of such systems, modules and units – or even entire qualifications – can be recognised/credited individually, regardless of the level.

IRELAND

The introduction of the National Framework of Qualifications in Ireland was preceded by two years of intensive consultations with all players in the education sector. This process was directed by the National Qualifications Authority of Ireland (www.nqai.ie)⁵, which was set up specifically for this purpose in February 2001.

The aim of these efforts was to develop a single structure that would be recognised nationally as well as internationally and that could be used to measure every kind of *learning outcome*, place them in relation to one another and define the relationships between *all* diplomas and certificates in the education and training sector. This qualifications framework is based on standards for knowledge, skills and competences.

Figure 1

National Framework of Qualifications
GRID OF LEVEL INDICATORS

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8	Level 9	Level 10
Knowledge <i>Breadth</i>			Knowledge moderately broad in range.	Broad range of knowledge.	Broad range of knowledge.					
Knowledge <i>Kind</i>			Mainly concrete in reference and with some comprehension of relationship between knowledge elements.	Mainly concrete in reference and with some elements of abstraction or theory.	Some theoretical concepts and abstract thinking with significant depth in some areas.					
Know-How & Skill <i>Range</i>			Demonstrate a limited range of practical and cognitive skills and tools.	Demonstrate a moderate range of practical and cognitive skills and tools.	Demonstrate a broad range of specialised skills and tools.					
Know-How & Skill <i>Selectivity</i>			Select from a limited range of varied procedures and apply known solutions to a limited range of predictable problems.	Select from a range of procedures and apply known solutions to a variety of predictable problems.	Evaluate and use information to plan and develop investigative strategies and to determine solutions to varied unfamiliar problems.					
Competence <i>Context</i>			Act within a limited range of contexts.	Act in familiar and unfamiliar contexts.	Act in a range of varied and specific contexts taking responsibility for the nature and quality of outputs; identify and apply skill and knowledge to a wide variety of contexts.					
Competence <i>Role</i>			Act under direction with limited autonomy; function within familiar, homogenous groups.	Act with considerable amount of responsibility and autonomy.	Exercise some initiative and independence in carrying out defined activities; join and function within multiple, complex and heterogeneous groups.					
Competence <i>Learning to Learn</i>			Learn to learn within a managed environment.	Learn to take responsibility for own learning within a supervised environment.	Learn to take responsibility for own learning within a managed environment.					
Competence <i>insight</i>			Assume limited responsibility for consistency of self-understanding and behaviour.	Assume partial responsibility for consistency of self-understanding and behaviour.	Assume full responsibility for consistency of self-understanding and behaviour.					

National Qualifications Authority of Ireland (NQAI)

Ireland's National Framework of Qualifications is a learner-centric framework that shows the various awards that can be earned at all levels of Ireland's entire education system and their relation to one another in a transparent and easily understood way. From a national point of view, it is of central importance in this context that the country's NQF has given new meaning to the concept of an "award". Today, an award makes a statement about actual learning outcomes. In other words, the important thing now is what the individual holding the particular award knows, can do and understands – and not how much time he or she spent in a certain programme.

The framework is comprised of ten levels, each based on specific standards for knowledge, skills and competences. These standards define the learning outcomes that the individual must achieve in order to earn an award for a particular level. The ten levels offer room for awards that can be earned in school, on the job, at training centres, colleges, universities and the like. New awards that recognise and certify skills and competences that have been informally acquired also have a place in the framework's design and architecture.

The Irish qualifications framework is of interest particularly in light of its elaborated set of standards for knowledge, skill and competence. The ten levels are delineated in eight descriptor groups (Knowledge: *Breadth and Kind*, Know-how and skill: *Range and Selectivity*, Competence: *Context, Role, Learning to Learn, Insight*), forming an 8 x 10 grid. The level indicators developed for this make it possible to position awards within the grid. Using these indicators it is also possible to assign the learning outcomes from individual units to the appropriate level in the grid and to develop new modules with an eye to this structure.

Framework level	Level indicators	Examples of qualifications
Entry		
Level 1		
Level 2	Level 2 qualifications recognise the ability to gain a good knowledge and understanding of a subject area of work or study, and to perform varied tasks with some guidance or supervision. Learning at this level involves building knowledge and/or skills in relation to an area of work or a subject area and is appropriate for many job roles.	NVQ 2; GCSEs Grades A* - C; Certificate in Coaching Football; Diploma for Beauty Specialists
Level 3	Level 3 qualifications recognise the ability to gain, and where relevant apply a range of knowledge, skills and understanding. Learning at this level involves obtaining detailed knowledge and skills. It is appropriate for people wishing to go to university, people working independently, or in some areas supervising and training others in their field of work.	Certificate for Teaching Assistants; NVQ 3; A levels; Advanced Extension Awards; Certificate in Small Animal Care
Level 4	Level 4 qualifications recognise specialist learning and involve detailed analysis of a high level of information and knowledge in an area of work or study. Learning at this level is appropriate for people working in technical and professional jobs, and/or managing and developing others. Level 4 qualifications are at a level equivalent to Certificates of Higher Education.	Diploma in Sport & Recreation; Certificate in Site Management; Certificate in Early Years Practice
Level 5		
Level 6		
Level 7		
Level 8		

Quelle: Qualifications and Curriculum Authority, QCA, UK

Figure 2 Extract from the NQF of England, Wales and Northern Ireland

To illustrate this, Levels 3 through 5 are detailed shown in Figure 1. These levels correspond more or less to those levels in Germany that would be reserved for vocational education and training. Since Ireland's framework covers all sub-systems – from both general education and vocational training – in the country's education system, Levels 3 through 5 list awards from both these sectors, because the goals and learning outcomes tally with the respective level indicators. These levels contain not only the Leaving Certificate but also the Leaving Certificate Vocational Programme and the Leaving Certificate Applied that prepares

the individual for making the transition to the labour market.

Ireland created a “softer” framework. Its NQF builds on or incorporates existing structures. Rather than being implemented “from the top down”, it was developed following extensive consultations, following the motto “enable rather than dictate”.

ENGLAND, WALES UND NORTHERN IRELAND

A revised National Qualifications Framework went into effect in England, Wales and Northern Ireland in September 2004. The new NQF expanded the original five levels to eight and added corresponding entry levels. This change relates to qualifications earned in the higher education field.⁶

This national qualifications framework covers general certificates through to the end of secondary level II and vocationally-related and occupational certificates starting from secondary level I.

To facilitate comparison, Figure 2 details the level descriptors that generally correspond to Levels 2 through 4 of the framework used in England, Wales and Northern Ireland.

This framework is intended to assist learners with decisions on their personal education path by offering them a means of comparing accredited qualifications. A database was set up for this purpose.⁷

A variety of objectives played a role in the development of this framework as well. These aims included fostering access to education and training, boosting international competitiveness, promoting life-long learning by making education paths transparent, avoiding the duplication and overlapping of qualifications (such as diplomas, certificates) as well as promoting confidence in the substance of the country's own national certificates and diplomas.

In addition to the NQF, England, Wales and Northern Ireland also have a Framework for Higher Education Qualification levels (FHEQ) that is organised in five levels and must be viewed parallel to the NQF's revised Levels 4 through 8. As a result, this has placed vocationally-related and occupation-oriented qualifications on a par with other qualifications in higher education, albeit in a separate “flanking” framework.

The NQF is also an outcomes-oriented framework. In other words, the qualifications/awards classified as belonging to a certain level are comparable in terms of the level of the acquired skills they represent. The respective diplomas and certificates are also assigned to the appropriate level on the basis of descriptors.

Development of European reference framework for qualifications and skills

In its communication on the status of the Lisbon strategy⁸, the European Commission calls for the immediate establishment of a European qualifications framework. It notes that without a European framework for the recognition of qualifications earned through vocational training or higher education, the European labour market cannot function effectively and smoothly. This objective is considered a top priority for the successful implementation of the Lisbon strategy. According to the Commission, the successful establishment of a European qualifications framework would comprise an instrument for strengthening coherent strategies for life-long learning, foster the quality and attractiveness of vocational education and training, and promote mobility.

There is to be a European framework for a number of structural elements. The Copenhagen Declaration on enhanced cooperation in vocational education and training particularly stresses transparency, credit transfer and quality assurance and assigned these issues to special working groups. The higher education sector is pursuing the same aims, but started somewhat earlier. Working on the basis of the Bologna Declaration on enhanced cooperation in higher education – which they honed and continued to develop in the Prague Communiqué and at their Berlin meeting – the education ministers have reached agreement not only on transparency and credit transfer but also on a system of comparable diplomas and certificates – a qualifications framework. The work on this has already reached a relatively advanced stage.⁹

Developments in vocational education and training and in higher education that had taken place on a parallel basis up to that time were a focus during Ireland's term as president of the Council of the European Union. The establishment of a comprehensive European qualifications framework was subsequently also programized: "The European framework should link together the wide diversity of different qualifications frameworks and systems at national level, so that these systems are able to communicate, and so that individuals can move between them."¹⁰

Prompted by the results of a qualifications framework study¹¹ commissioned by the Copenhagen ECVET working group, the Commission has now added the European Qualifications Framework to its agenda.¹² It foresees a broad consultation process that should be concluded in the spring of 2006 with the Education Council's adoption of the framework.

*The European framework
should link together the wide
diversity of different NQFs*

A national framework for qualifications and skills in Germany?

By stipulating a short timeframe for the development of a European qualifications framework, the European Commission has placed pressure on EU member states – and on Germany in particular – to take action.

Germany has traditionally belonged to that group of countries – such as France – that take an institution-oriented or process-oriented approach. In other words, its education paths are largely anchored in institutional (vocational or academic) communities. This contrasts with the fundamentally outcomes-oriented approach taken by English-speaking countries that is an essential element of qualifications frameworks. Is it conceivable to have an outcomes-oriented NQF that also retains the above "mooring" for initial education and training?

The rudiments of an NQF already exist in Germany.

A qualifications framework for a specific field was established for the first time in Germany in the form of the three-stage continuing training system that was set up in the IT field.

The continuing IT training system with its three levels – specialist, operative professional and strategic professional – constitutes (along with the IT occupations at skilled worker/skilled salaried employee level) the core of a qualifications framework that could also be applied to other branches.

Germany's social partners commissioned a panel of experts back in 1996 to develop a system of qualifications levels for regular upgrading training pursuant to the Vocational Training Act.¹³ Unveiled in late 2000, the experts' plan envisaged three levels: advanced qualification that requires additional qualification which in turn differentiate it from vocational training; qualification for middle-level skilled workers and management personnel (such as master craftsmen, specialists, commercial specialists such as bank clerks, industrial clerks or IT officers); qualification for management positions in medium-sized companies or the decentralized organizational units of large enterprises. The middle and upper levels are classified as belonging to the

bachelor or master's level. The social partners "want their efforts toward regulating training and the federal government's continuing training regulations to be based on this concept in the future" (ibid). The continuing IT training system was the first to implement this concept. The chemical and construction industries will follow.

At the same time that the regulations for continuing IT training were adopted, Germany's education and economics ministries and the social partners declared themselves in favour of a system for counting vocational qualifications toward higher education, with an eye to boosting mobility between the vocational education and training system on the one hand and the academic education system on the other.¹⁴ In their recommendation regarding the granting of credit points for continuing vocational training and counting them toward university studies, which the Federal Ministry of Education and Research, the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany ("KMK") and the German Rectors' Conference (association of state and state-recognised universities and other higher education institutions - "HRK") issued to Germany's universities on July 8, 2003, these bodies advocated the general implementation of such a system.

Future work must draw on and move forward from these objectives and the groundwork that has already been laid (in the IT field). Moving forward will require, as a first step, studies on the design and use of national frameworks. Such studies should focus particularly on the questions:

How many levels will be needed to capture existing qualifications/skills adequately? Which descriptors are appropriate for describing knowledge, skills and abilities and for differentiating between them on a constructive basis? Are there general descriptors that can cover all characteristics specific to individual fields in an appropriate way? Could there be an integrated set of descriptors that encompasses vocational training and higher education in a single continuum or do these two education systems follow fundamentally different sets of logic (experience versus written/more explicit knowledge, as the case may be)?¹⁵ How can the provisions for granting credit be formulated? And lastly, the question arises whether it is possible to agree on descriptors that allow an appropriate portrayal/classification of various sets of competences (qualifications, occupations). The answer to this question will require comprehensive coordination that involves all parties at every level of the qualification system.

To return to our opening question: A national qualifications framework could help eliminate the previously mentioned obstacles. This would however require the social bodies and institutions that are "responsible" for designing and organizing qualifications to work together across the boundaries of their traditional territories. It would also require the involvement of new players. Only under these circumstances will it be possible to ensure the acceptance and credibility that qualifications need in order to function as a kind of "currency" on national and international labour markets. ■

Remarks

1 G. Hanf, J. Reuling: *Qualifikationsrahmen – ein Instrument zur Förderung der Bezüge zwischen verschiedenen Bildungsbereichen?* BWP 30 (2001) 6, pp. 49-54

2 Cf. Michael F. D. Young: *National Qualifications Frameworks as a Global Phenomenon: a comparative perspective*. In: *Journal of Education and Work*, Vol. 16, No. 3, September 2003, pp. 223-237

3 The OECD has taken up this topic from this angle with its activity "The Role of Qualifications Systems in Promoting Life-long Learning" (www.oecd.org/edu/life-longlearning/nqs)

4 Michael F.D. Young, *ibid.*, p. 225

5 National Qualifications Authority of Ireland: *Towards a*

National Framework of Qualifications - Establishment of Policies and Criteria, Dublin 2002

6 www.qca.org.uk/qualifications/types/493.html

7 www.openquals.org.uk/openquals/SimpleSearch.aspx?nav=key

8 *Education & Training 2010: The success of the Lisbon Strategy hinges on urgent reforms: Joint interim report by the Council and the European Commission*, March 3, 2004 http://europa.eu.int/eur-lex/pri/en/oj/dat/2004/c_104/c_10420040430en00010019.pdf

9 Cf. V. Gehmlich: *Entwicklung eines europäischen Qualifikationsrahmens*. In: BWP 33 (2004) 6, pp. 17-22

10 Speech delivered by N. van der Pas on March 8, 2004

11 Mike Coles and Tim Oates: *Understanding zones of mutual trust and developing European reference levels for education and training* (unpublished manuscript)

12 Maastricht Communiqué on the Future Priorities of Enhanced European Cooperation in Vocational Education and Training (VET) from December 14, 2004

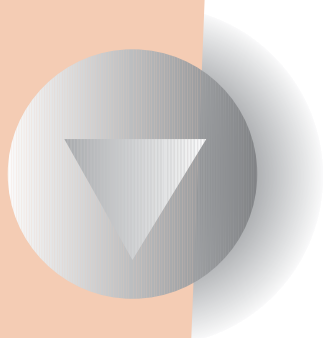
13 Federal Ministry of Education and Research: *Report on Vocational Education and Training for the Year 2002*, p. 222 (German version)

14 Statement by the social partners' umbrella organizations, the Federal Ministry of Education and Research and the Federal Ministry of Economics and Technology on the implementation of university credit point systems in continuing

vocational education and training based on the example of the Continuing IT Training Ordinance. In: *Federal Gazette No. 105a* dated June 12, 2002.

Regarding the question of how a credit system could work, please see Kerstin Mucke: *Förderung der Durchlässigkeit zwischen beruflicher und hochschulischer Bildung*. In: BWP 33 (2004) 6, pp. 11-16

15 K. Harney, G. Kissmann: *Maßstabsbildung, lokale Anpassung und hochschulischer Raumgewinn: Europa als Umwelt der beruflichen Ausbildung in Deutschland*. In: *Jahrbuch Arbeit, Bildung, Kultur*, published by Forschungsinstitut für Arbeiterbildung, Vol. 18/2000, pp. 43-68



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

► The importance of "Europeanizing" 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 2010.¹

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".² 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 internationalized, 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.³

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 practiced 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, organizational 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, In-



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Useful links

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 (Deutscher Übungsfirmenring = German Practice Firm Circle)

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 (German-Austrian project and product database)

www.regiokom.de/nw_grenzregion/index.htm (Netzwerk Grenzregion – Border Region Network)

www.Leonardo.th.schule.de/ (BIL-VOC project)

Internet-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 po-

tential 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.⁴ 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

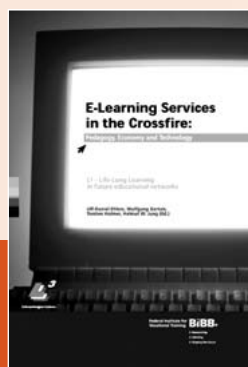
Vocational Education and Training ("BIBB"). In addition, transnational collaborative training is currently a focal area for Germany in connection with the Leonardo mobility programme.

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



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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 "L₃ – Life-Long Learning".

The L₃ project was funded by the Federal Ministry of Education and Research and carried out under the sponsorship of the Federal Institute for Vocational Education and Training.

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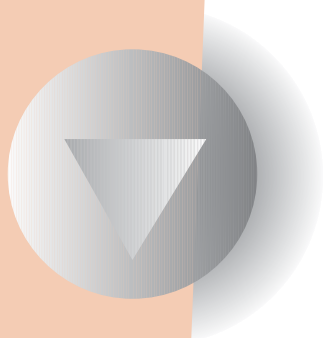
514 pages, ISBN no.: 3-7639-1024-7
Detailed bibliographic data is available in the internet at <http://dnb.ddb.de>.

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. ■

Remarks

- 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."



The German Vocational Training Reform Act of 2005: What is new, what is different?

► **The German system of dual vocational education and training enjoys worldwide recognition. To maintain this status, both the training and the legislation governing it have to keep pace with the challenges of the modern world. The Vocational Training Reform Act has comprehensively amended the Vocational Training Act of 1969 (BBiG 1969) and the Vocational Training Promotion Act of 1981 (BerBiFG), and combined them into a single law. The objective of the reform is to secure and improve training opportunities for young people and to guarantee that each and every one of them – regardless of social or regional background – receives high quality vocational training. The Act entered into force on April 1, 2005. This article sets out the most important reforms.**

At the beginning of 2004, when the Federal Ministry of Education and Research (BMBF) set out its agenda for reforming the German law on vocational training, the road to reform seemed fraught with insurmountable hurdles. Essentially, the reasons for this were twofold:

Firstly, a lack of material consensus. The issue of reforming the 1969 Vocational Training Act had been a shared concern of all the stakeholder groups – the Federal and Länder governments and the social partners – for some considerable time. On the evidence of the position papers submitted by each of these groups at the beginning of the legislative process, however, this was the sole point of agreement that united all the stakeholders. Catchy headlines like “Higher quality in vocational education” or “More flexible pathways in vocational education” attracted a wide variety of interpretations which – to judge from the instrumental level – were often diametrically opposed or inherently contradictory.

Secondly, in parallel to the initiation of the legislative process, the Federal Government was confronted with the demand of some Länder during Federalism Commission consultations to transfer competence for “the law on vocational training in non-school settings” (and hence for the Vocational Training Act) to the Länder entirely. In view of the fact that the Vocational Training Reform Act – in whatever form it might have taken – would nevertheless require the approval of the Bundesrat, it is fair to say that the Federal Government’s position was far from comfortable.



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Principles under constitutional law

With specific regard to the latter point, the first priority was to secure the working basis for reform, i.e. Federal Government competence for vocational training in non-school settings. Thanks largely to the inclusion of the social

partners in the process, the shift of responsibility for this area of law from Federal Government to the Länder was struck from the agenda of the Federalism Commission before its final consultation (for the time being) in December 2004. It was particularly helpful in this regard that BIBB's Central Committee had passed a resolution on December 12, 2003, summing up the relevant educational and economic policy concerns, past and present, and presenting forceful arguments against such a transfer of competences:

"The fragmentation of nationwide training standards would engender

- increased costs and organisational overhead for companies with supraregional operations,
- increased administrative overhead for public bodies,
- additional burdens in terms of adaptive training,
- loss of standardisation in the vocational training system,
- restriction on mobility for employment,
- loss of legal security,
- loss of confidence in the dual system in the competitive international environment,
- loss of transparency, manageability and comparability, leading ultimately to a loss of training places" (cf. BWP 1/2004, Board Supplement).

Since these arguments will still hold if the Federalism Commission recommences its work, it can be assumed that competences for vocational training will continue to be shared, with vocational training in non-school settings remaining the preserve of Federal Government while responsibility for school-based vocational training is retained by the Länder.

The main reforms in the Act

The aspiration to draft a law which satisfied all the requirements of all the parties in every respect would have been impossible to fulfil. As we set about the task, we therefore endeavoured not to be influenced by entrenched vocational training policy ideas in the first instance, and not to become entrenched ourselves. The initial starting point for our considerations was therefore a point of fact and a line of enquiry:

Firstly, the core content of the 1969 Vocational Training Act (BBiG 1969) has stood the test of time. It was supported by a broad social consensus, and played a substantial part in opening up good future prospects for the vast majority of young people and securing the long-term role of 'education and training' in German society.

Secondly, which economic and social changes require a response from the legislature in order to sustain this in the



future? Three principal strands of change were identified to which the legislature needed to respond:

- German industry must now compete in global markets,
- the modern world of work is more complicated and subject to constant change, and
- in practice, a substantial proportion of initial vocational training takes place in schools.

INTERNATIONALISATION

The new provisions in § 2 subsection 2 of the Vocational Training Act establish the possibility of completing limited periods of initial vocational training in another country. Thus the period spent abroad is deemed by law to be a part of initial vocational training, as long as it is relevant to the training objective. This will be the case if the training elements taught abroad are essentially equivalent to the training provided in the home country, or if language skills are taught or other additional competencies are acquired.

Since the phase completed abroad in these cases does not interrupt the training contract, further provisions – on such matters as compulsory payment, recognition of the skills, knowledge and abilities acquired abroad or the trainee's tax and social security status – are superfluous.

A stay abroad may only take place in consultation with those responsible for training. The length of placements abroad should be in proportion to the overall length of the initial vocational training. The duration of phases of training abroad was therefore limited to a maximum of one-quarter of the duration of training stipulated in the relevant training regulations. For this calculation, any credit for prior training or reduction in the length of training obtained under §§ 7 and 8 BBiG is not taken into account.

The revisions to §§ 2 and 76 provide for the option of organising periods abroad as an integral element of initial vocational training. An alternative option which has been retained is to complete periods of training abroad under sabbatical leave or release arrangements, and to apply to the competent assessment body for credit towards a qualification.

UPDATED PROVISION ON DELEGATED POWERS TO ISSUE TRAINING REGULATIONS

The provision on delegated powers to issue new training regulations in § 4 in conjunction with § 5 of the new BBiG is essentially based on the old provision on delegated powers in § 25 of the 1969 Vocational Training Act (BBiG 1969). A clear distinction is now drawn between the minimum provisions that a training regulation must contain, and other matters on which provisions may optionally be included in the training regulation.

Under § 5 subsection 1 the *minimum provisions* that must be included are:

- the name of the training occupation to be recognised,
- the duration of training, which should be no more than three and no less than two years as before,
- the occupational skills, knowledge and abilities to be taught, as a minimum, during the course of the initial vocational training,
- an outline of the syllabus and timetable to be followed for the purpose of teaching the occupational skills, knowledge and abilities, and
- the examination standards.

In § 5 subsection 2 there is a list of the *possible additional provisions* that a training regulation may contain. In this context, for example, it is made clear that in the case of genuine “multi-stage training” (§ 5 subsection 2 point 1), the training contract ends upon completion of the final stage (§ 21 subsection 1 sentence 2). In the case of “non-genuine” multi-stage training (§ 5 subsection 2 point 4), i.e. if an interim stage already results in qualification for a training occupation recognised according to the Vocational Training Act, this does not apply.

§ 5 subsection 2 point 2 now explicitly opens up the possibility of holding the final examination in two parts at different times (known as the *extended final examination*). If this possibility is used, corresponding regulations (e.g. timing of the first section of the final examination, training curriculum to have been covered by this time, weighting of the parts of the examination) must be set out in the training regulation. For this situation, § 37 subsection 1 sentence 2 clarifies that the first part of the final examination cannot be repeated in isolation. Other consequential amendments are found in § 37 subsection 2 sentence 3 (notification of examination results), § 55 (admission to the final examination when parts are taken at separate times) and § 48 subsection 2 (dispensability of interim examinations). Another newly introduced provision makes it possible within the framework of the training regulation itself to *teach and examine additional competencies* relevant to vocational training in the particular occupation. These may take the form of optional modules

in a training regulation or parts of other initial and further training regulations.

In this respect, the Act supports much wider relevance to the labour market and greater interpenetration of initial and continuing vocational education and training.

The ‘experimentation clause’ provided in § 6, i.e. the *basis empowerment to issue pilot regulations*, is extended in several respects. Firstly, by separating the basis for these delegated powers from the context of what is known as the “principle of exclusivity” under § 28 subsections 1 and 2 BBiG 1969, it is made clear that pilot regulations need not be restricted to exceptions from the exclusivity principle. Secondly, the general aims of pilot regulations, which previously focused on new forms of vocational training and occupations, will be extended to new forms of examination.

MODIFIED PROCEDURE FOR CREDITING PRIOR VOCATIONAL TRAINING TOWARDS THE PERIOD OF TRAINING

In contrast to § 29 subsection 2 of BBiG 1969, § 7 subsection 1 of the new BBiG delegates to the Länder the decision on whether to allow prior learning at a vocational school or other vocational training establishment to be credited towards a subsequent period of initial vocational training in a recognised occupation. The Länder governments may decide by ordinance whether periods of training at vocational schools or other establishments can be credited towards the duration of company-based initial vocational training, and what length of reduction to allow. As a rule, this possibility can only be contemplated if the syllabus contents and timetables of such training courses correspond to those set out in the training regulation of a recognised training occupation. Secondly, in future (from 2009 at the latest) the procedure will require a joint application for credit by all parties to the training contract, since the granting of credit inevitably shortens the length of in-company training, in effect modifying the contractual terms binding the respective parties.

In a similar vein, it was recognised that in special cases (e.g. apprentices who are lone parents or have caring responsibilities for a dependent relative), *part-time vocational training* may be possible.

The regulations governing admission to the final examination for “*Externe*” (employees beyond the scope of normal initial vocational training) were also amended. Sentence 2 of § 40 subsection 3 of BBiG 1969 gave the Federal

Ministry for Economics and Labour powers to determine by ordinance which schools and institutions offer courses which meet the standards of the BBiG. This

*The Act
supports relevance to the
labour market*

“confirmation of equivalence” would give trainees who had completed such courses the right to be admitted to the chamber examination. As yet, however, no use has been made of the power to pass such ordinances. § 43 subsection 2 now provides for delegating to Länder governments the decision on which training courses meet all the standards specified in the BBiG for an initial vocational training programme. This enables the Länder to offer full-time school-based vocational training courses run according to the structures and syllabus content specified in BBiG for a vocational training course, to provide high standards of training which is relevant to the labour market, and to conduct final examinations in accordance with the BBiG. Firstly, this provision brings together the decision-making authority (establishment by the Länder of school-based training courses leading to full qualifications) and the responsibility for incorporating these courses into the vocational training system. Secondly, it serves to reduce unnecessary and costly delay periods within the education and training system.

This part of the Act deliberately gives the Länder scope to exercise their responsibilities. It remains to be seen whether and to what extent the Länder make use of the opportunity. In recognition of this uncertainty, the plan is to carry out an evaluation to study the influence of the provision on the overall system of dual vocational training. This should enable conclusions to be drawn as to whether the current time limit imposed on this provision of up to August 1, 2011 should be retained or removed.

OTHER AMENDMENTS TO THE BBiG

The provisions which were spread across §§ 20 to 24 and Division 6 of the 1969 Act, concerning the *suitability of training premises and staff* are brought together in a new section of the reformed Act and numbered in a systematic order (§§ 27 to 33).

Apart from the possibility already mentioned, of conducting the final examination in two parts, attention is drawn to the following reforms of the examination system:

- Under § 39 subsection 2 the board of examiners may *request expert third-party reports* in order to assess certain examination skills which cannot be tested orally. The impetus for this arose from the long-running debate on whether and to what extent progress achieved at vocational school can be counted towards final examination results. The new BBiG has not embraced the demand to give credit for these vocational school results and not to allow corrective intervention by the board of examiners. However, it permits the board of examiners to make use of “expert” third-party reports, particularly from vocational schools, for the assessment of certain examination skills in future. It is essential for the board of examiners to retain the right to alter the suggested grades.

- Under § 42 subsection 3, the chairman of the board of examiners may also delegate at least two members to assess particular examination skills which cannot be tested orally, in preparation for the decision-making process. § 42 subsection 2 thus creates an *exception to the principle of collective responsibility*, without affecting its essential integrity. As in the case of § 39 subsection 2, when the ‘rapporteur principle’ is applied, all substantive facts must be documented. Here too, the collective body retains the right to alter the assessment result.

The special provisions previously included in Division 6 of the Vocational Training Act on “*Definition of the competent body*” are grouped in §§ 71 to 75 of the new Act. The existing principle of segregation according to business, industry, and occupational sectors is dropped in favour of a more transparent classification system. One reason in particular was that the legislative pairing of competent bodies to concrete training occupations caused difficulties in practice and was often overtaken by current developments in the reform process. For example, the occupational titles of “Lawyers’ Assistant” (§ 87 BBiG 1969) and “Dentists’ Assistant” (§ 91 BBiG 1969) have long been replaced by more up-to-date occupational titles.

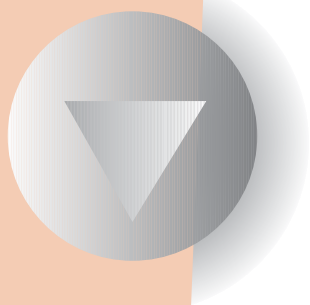
FEDERAL INSTITUTE FOR VOCATIONAL EDUCATION AND TRAINING

A core element of the amended regulations on the Federal Institute for Vocational Education and Training (BIBB) is a reduction in the number of its committees. The responsibilities of the former Central Committee and the former Permanent Committee are combined and assumed by a *new Board*. At the same time, the number of Board members is reduced from 53 to 29 people. The expert committees and the Länder Committee are abolished.

This reduction in the number of committees is balanced by the *establishment of a new Research Council*, which is a response to developments in institutional research in the past few years. It is in keeping with the modern view of research institutions that their work should be subject to continuous quality control and quality assurance. By virtue of this external monitoring, in which some foreign scientists will take part, for example, some valuable input to research projects is likely to accrue.

(On the new regulations affecting BIBB, also see the article by MÖLLS in this issue – Ed.)

The Bundesrat unanimously approved the new Vocational Training Act in its session on February 18, 2005. This is an indication of the very broad consensus upon which the Act has been founded, in both the German Bundestag and the Bundesrat. None of the hurdles proved insurmountable after all. The Act entered into force on April 1, 2005. ■



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 workers¹ were unemployed² 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.



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(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 1993.³ 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 187,000.⁴

(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 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.⁵ 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.⁶

However, the 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.⁷

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. box)

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.⁸

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 preparation⁹:

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.¹⁰



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,¹¹ 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.

Overview

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 that 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 projects¹². 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 in them all the features of vocational training preparation listed in the overview apply.

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 Training¹³ 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.

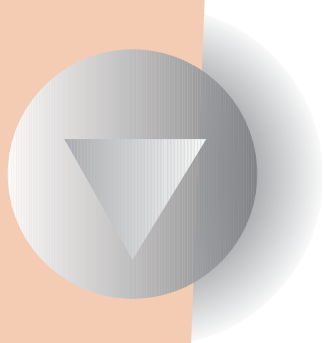
As long as the Law on Securing Vocational Training has not come into effect and cannot develop the hoped-for

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 takes 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. ■

Remarks

- 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 Nr. 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 Nr. 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, Mettin, Rütter, Schwarz, Webers, Westphal, Ziele: 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.
- 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. 12. January 2004.
- 12 Cf. the April 2003 issue (No 16) of the journal directly: 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.**

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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.¹ 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 (esp. in the ICTs) 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 did not take 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.² 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 in view of 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 field³, 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 activities⁴ 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.⁵ 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)

Figure 1 Identification of suitable work process steps

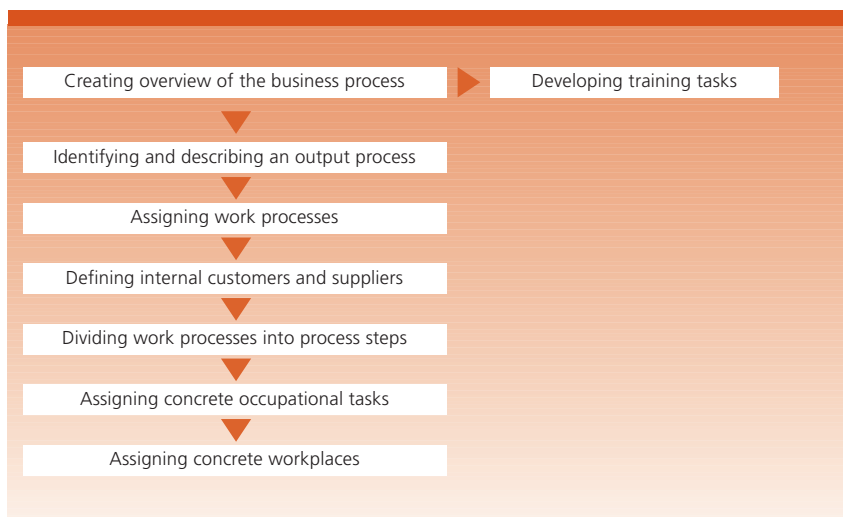
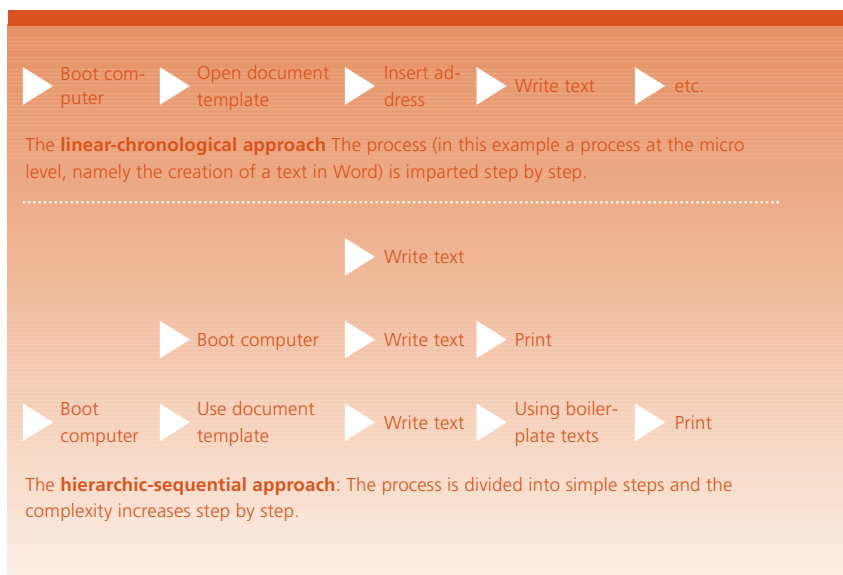


Figure 2 Planning of occupational tasks



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.

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-chronologically 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 and 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

cooperatively. 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.⁶ 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 (cf. the article by KOCH/KRÜGER, p. 10)
2. Using online communities as problem-solving aids⁷ in the context of on-the-job learning arrangements;
3. Open learning architectures as additional information, communication and cooperation opportunities⁸ 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.⁹ 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 has 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 afflicted,

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

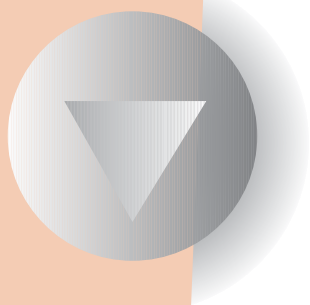
Process orientation as a new didactic concept¹⁰ in education and training relates to organisational development as a whole and thus confronts the personnel in occupational pedagogy with fundamentally new tasks. The teaching staff is expected to start by identifying the business, output and work processes 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.¹¹ 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 plans, organises and moderates 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 sufficiently prepared for, 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.¹² 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.¹³ ■

Remarks

- 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 Arbeits-prozeß-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
- 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) forum 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
- 9 Cf. the "Verordnung über die Erprobung einer neuen Ausbildungsform für die Berufsausbildung in den industriellen Elektroberufen" and there in 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 Cf. the discussion in the article by Koch/Krüger in the present issue
- 12 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
- 13 We would be happy to receive feedback on this article. For a public discussion we suggest the forum "Process-oriented training" on 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.



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The 1970s: Development of quality assurance through examinations

There are two peculiarities above all that distinguish examinations under the Vocational Training Act 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.¹ 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.² In the *practical examination* there was a test piece and a work sample, whereby in the case of the test piece only the final result was graded, that is, the product

Changes in examination practice

was assessed, while in the case of the work sample the 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 started to voice initial criticism already 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 to a large extent the conventional written examination also dealt only 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 eighth decade that skills testing and knowledge testing was 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” was also already introduced into the debate at 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.³ 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” (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.⁴ It was implemented for the first time when the regulations for the new industrial electrical trades came into effect on 1 August 2003.⁵

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, and that 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.

Figure 2 New forms of examinations since 1997

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

- 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.

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.⁶

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

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.⁷

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.⁸ 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 questions. 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 in honorary work, 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 variety, creative disarray and 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.⁹

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 that 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 Ordinance¹⁰ enacted in the year 2002, completely new roads were taken in the examination system as well. Qualifica-

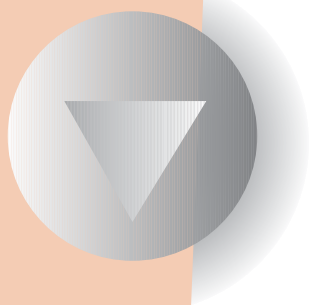
tions as IT specialists are acquired not through the public examination but in the context of a privately regulated certification procedure. What is certified is the knowledge acquired in the process of work, tested on the basis of documents presented (process-integrated documentation) and prescribed 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. ■

Remarks

- 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.



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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 the training sectors industry and trade and the manual professions in western Germany, as these were the only sectors included in the 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 work place, 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

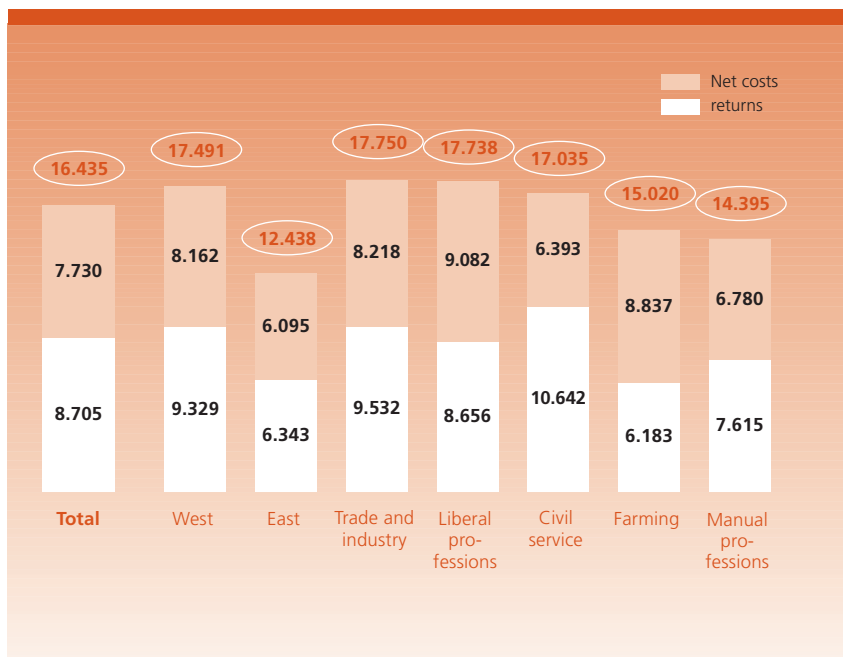
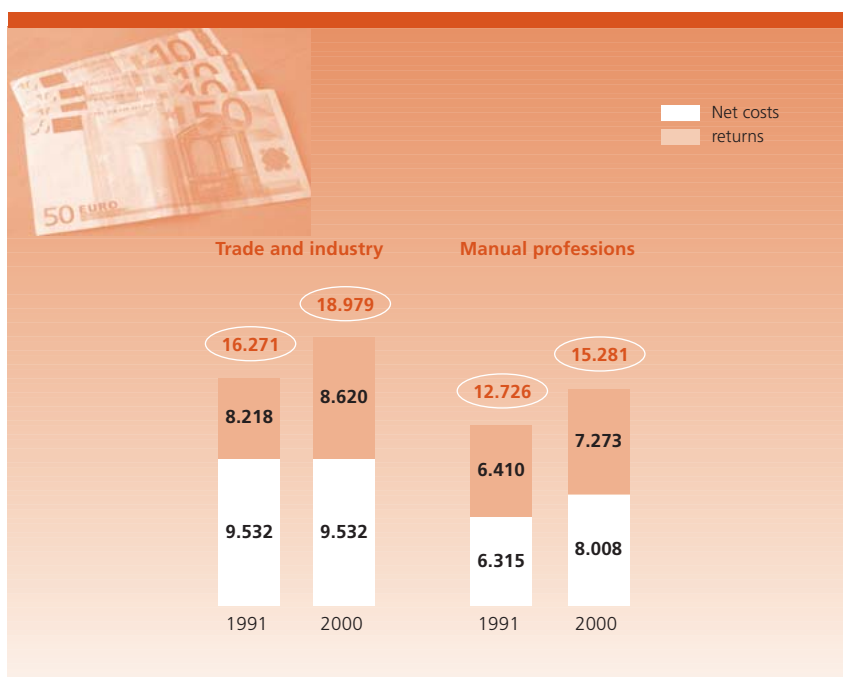


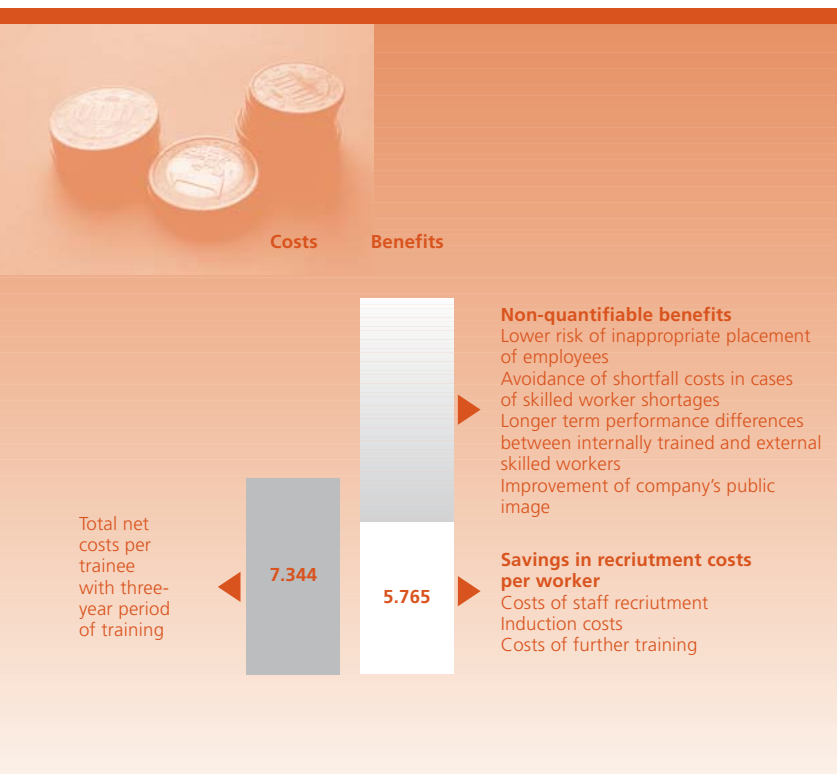
Figure 2 **Gross costs, returns and net costs (full costs) of in-house vocational training in trade and industry and the manual professions in western Germany from 1991 to 2000** Average sums per trainee per year in Euro



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 is provided (see Figure 3). This benefit can be estimated and expressed in monetary terms.

Figure 2 **Net costs (direct costs) and benefits on in-house vocational training in 2000**
Average sums in Euro



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 per year less. If this advantage of employing external skilled workers is offset

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*

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.

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.

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